1: McGee E-5 (1894-1895)1898 NU31 S...t NU31

and larger bones, sucked up the blood stains, and buried the few remains in cactus thickets, impenetrable save by their own hardy limbs and bodies. Nor did any of the tribe except the two restrained neophytes ever really enter the collective life of the patriarchal group headed by Don Pascual; they attended no industrial or social or churchly function save in response to reminder and solicitation; they craved the white man's medicines in slight disorders, but rejected them in extremis; and the dying or dead were spirited away to be inhumed and mourned, according to their wont, in their harsh but beloved motherland.

During this period of mutual toleration the Seri were so deeply influenced by the white contact that, for probably the only time in their history, they voluntarily allowed an alien free entry into their territory; and Don Pascual explored the coast of Bahia Kino, projected a port, and even visited Isla Tiburon twice or thrice. In one of these visits he was ferried over Boca Infierno on a balsa, but, finding himself unable to keep pace with the swift-footed Seri on their hilly pathways, he returned for his saddle mule; halfway across, the poor animal swimming behind the balsa suddenly plunged and struggled, and, on landing, hobbled out on three legs—the fourth having being snapped by a shark. Warned by this incident, Don Pascual abandoned a half-formed plan of stocking the island, and afterward brought up a small vessel from Guaymas in which he carried across a dozen caballeros (including Don Ygnacio Lozania, who had visited the island with the Andrade expedition); and this party examined the southeastern quarter of the island, watering two or three times at Tinaja Anita, and pushing as far westward as Arroyo Carrizal. On this trip he studied the Seri house-building, and was the first to note the large use of turtle-shells and sponges in the process.[1]

About the middle fifties it became apparent that the Seri were dividing into a parasitical portion clustered about the rancho (as their forbears gathered about Populo and Pueblo Seri long before), and a more independent faction clinging to their rugged ranges and gale-swept fishing grounds; and it became evident, too, that the thievery of the dependent faction would soon ruin the rancho if not checked, or at least greatly diminished. Accordingly the passive policy was modified by introducing a more active police service. At first the penalties for theft and misdemeanors were light, and the system promised well—especially as even a slight punishment was equivalent to banishment, the criminal fleeing to Tiburon on his escape or immediately after the crime; yet the experience of a year or two proved that the escaped parasites seldom resumed the hard customs of their tribal life, but generally returned to the borderland and there preyed on the wandering stock from the rancho. Finally, driven to extremity, and supported

[1] Typical Seri houses, as described by Don Pascual in 1854, were observed on Tiburon by the 1895 expedition, as shown by the photographs reproduced in plates VII, VIII, and IX.

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648 been slaughtered for some months, an aged woman may be seen skulking about the mesquite clumps in sight of the rancho; if her presence is tolerated for a day or two, she approaches to beg for water and food and to receive the cast-off rags hastily forced on her nakedness by the sensitive señoras; if she deem her welcome not too chill, she erects a jacal a few hundred yards away, and there she is usually found, a morning or two later, to be accompanied by a younger matron with a child or two; and if these are tolerated, the rancheria may grow to half a dozen jacales and half a hundred persons.[1] The band may remain a fortnight or even a month; but in case of serious illness of any of their number, or of threat or punishment for petty peccadillos, or of an unusual storm, or of a brilliant meteor, or of any exceptional occurrence about the rancho, the rancheria is commonly found empty next morning. If the attachés of the rancho are indisposed to tolerate the first envoy, yet feel kindly rather than rancorous, she is merely dogged and stoned away like a depredating domestic animal from another hacienda; if the rancor of past encounters remains, the mercy accorded her is precisely that shown the predatory coyote or other feral animal from the fastnesses of the sierras—and the tribe take warning and doubtless rejoice that their loss is no greater.

1175 ●177 [648] Any recital of the common history of the peculiarly savage Seri and the whites necessarily conveys an exaggerated notion of intimacy and mutual influence, since it emphasizes the few positive interrelations scattered along the decades of neglected nonrelation; and this is true of the Encinas régime as of earlier centuries. The great fact is that throughout their recorded history the Seri have touched civilization so slightly and so seldom that the effect of each contact was largely lost before the next supervened; and the unprecedentedly intimate contact of the Encinas régime, especially during the initial period of abnormal toleration, serves less to indicate relationship in characteristics and sympathies than to measure the breadth of the chasm between the Seri and the Mexican—a chasm not exceeded, and probably not equaled, elsewhere in America. About the middle fifties, probably every Seri above infancy and below decrepitude had seen Don Pascual and some other habitués of the rancho; they yielded to the seductions of indolent scavengering apparently more numerously than ever before; they substituted cast-off rags and barter-bought manta (plain cotton cloth) for the products of their own primitive weaving; they ate cooked food when it fell in their way; they half-heartedly adopted metal cutting implements, and sought or stole nails and hoop-iron for arrowpoints; some of them acquired a smattering of Spanish, and many of them solicited and sported Spanish names, just as they begged and flaunted tawdry handkerchiefs and beads; and they generally enjoyed mildly the ecclesiastical fiestas, and took kindly to the cross as a symbol of peace and plenty and perhaps of deeper import. Yet

[1] A typical simple camp and the entire rancheria gathered at Costa Rica in 1895 are shown from photographs in plates I and II.

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even during this halcyon term no Seri save Kolusio and the Altar outlaw ever learned to live in a house; none but these and Mashém wore hats habitually; and, despite the fact that they often witnessed and sometimes playfully or perforce participated in the processes, no Seri ever really encompassed the idea of house-building or even of making adobe. Though surrounded by horses when near the rancho, they never learned to ride nor to use the animals otherwise than for immediate slaughter and consumption; though in frequent sight of skilful ropers, they never fully grasped the idea of the riata, preferring to seize their prey with hands and teeth; though familiar with the agricultural operations of the rancho, they never turned a sod nor planted a seed on their own account; though in frequent sight of cooking, they seldom began and never finished the process with their own food; though acquainted with firearms, they continued to regard them as thaumaturgic devices, and chose the bow and arrow for actual use; though submitting to apparel on the frontier, they commonly cast away the incumbrances on returning to their lairs; and no Mexican or other Caucasian ever saw within their esoteric life—their names remained unrevealed, their hair remained sacred, their mourning for the dead was unheard save at a distance, and no alien, even unto today, has ever seen the birth of their babes, the christening of their children, the burial of their dead, or the ceremonies of their shrines. The Seri and the whites were, indeed, mutually tolerant; but, so far as concerns mutual sympathy, the toleration was almost precisely on a par with that between the ranchero and the vulture-flock that scavengers his corrals—and when depredation began the toleration was of a piece with that between householders and their unwillingly domiciled rodents. It is not too much to say that the interracial mistrust and hatred of the Western Hemisphere culminates on the borders of Seriland; though the antipathy is commonly regarded by the alien tribesmen and the Mexicans as other than racial, since the Seri are felt to be hardly human—a feeling fully shared by the Seri, who undoubtedly deem themselves more closely akin to their deified bestial tutelaries than to the hated humans haunting their borders.

Even during the Encinas régime the Seri came in occasional contact with aliens on other parts of the frontier: on Hacienda Seris, the somewhat remoter borderland outpost on the north, the relations between the landholders and the Seri were analogous to those on the Encinas plains, though less acute in the ratio of relative distance. Occasionally small parties of warriors journeyed to Guaymas[1] on balsas or on foot to barter pelican-skin robes for Caucasian commodities, chiefly aguardiente and manta; still more rarely similar pilgrimages were made to the outskirts of Hermosillo; a few marauding raids were made to the ranchos lying near Ciénegulla and Caborca; and a num-

[1] The accompanying plate XII is reproduced from a photograph of a small group of Seri traders taken near Guaymas, probably during the eighties. It was kindly furnished by F. A. Ober, who purchased it in Guaymas.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

blocks or metates, though it is manifest that most of the camps were fireless and many foodless. It is particularly noteworthy that even the more temporary resting-places are seldom if ever less than a mile or two from the nearest fresh water. In short, the Seri are not a domiciliary folk, but rather homeless wanderers, customarily roving from place to place, frequently if not commonly sleeping where overtaken by exhaustion or storm, ordinarily slumbering through a part of the day and watching by night, habitually avoiding fresh waters save in hurried and stealthy visits, and apparently gathering in their flimsy huts only on special occasions.

In conformity with their rovingness the Seri are notable burden-bearers. They habitually carry their entire stock of personal belongings (arms, implements, utensils, and bedding), as well as their stock of food and—weightiest burden of all—the water requisite for prolonged sustenance amid scorching deserts, in all their wanderings, the water being borne chiefly by women, in ollas, either balanced on the head singly or slung in pairs on rude yokes like those of Chinese coolies. And they have never grasped the idea of imposing their burdens on their bestial associates; their coyote-curs are not harnessed or even led; when they surround and capture horses, burros, and kine they make no use of ropes, never think of mounting even when pursued by vaqueros, but immediately break the necks or club out the brains of the beasts, perchance to tear the writhing body into quarters and flee for their lives with the reeking flesh still quivering on their sturdy heads and brawny shoulders—and scores of vaqueros agree in the affirmation (wholly incredible as it would be if supported by fewer witnesses) that even when so burdened the Seri skim the sand wastes of Desierto Encinas more rapidly than avenging horsemen can follow.

The hardly conceivable fleetness of the Seri is conformable with their habitual rovingness and their ability as burden-bearers; and this faculty is established by cumulative evidence so voluminous and consistent as to outweigh the presumption arising from the standards attained among other peoples. A few minutes after they were photographed, the group of boys shown in plate XVI, with several others of about the same size, provided themselves with a stock of their favorite human-hair cords, "rounded up" a dozen mongrel coyote-dogs haunting the rancheria at Costa Rica, and herded the unwilling animals toward a shrubbery-free space a quarter of a mile away, in order to rope them in imitation of the work of the Mexican cowboys earlier in the morning. From time to time as they went a frightened cur sneaked or broke through the cordon of boys, and made for distant shrub-tufts at top speed; yet in every case a boy darted from the ring, headed off the animal within one or two hundred yards, and lashed it back to its place. On arriving at their miniature rodeo the boys widened their ring, and at a signal scattered and frightened the dogs; then, when the fleeing animals had a fair start, each selected his victim and fol-

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lowed it, yelling and swinging his light lasso, until, after much doubling and dodging and many unsuccessful casts, he caught and dragged the howling beast back to the open; and it was only after half a dozen repetitions that enough dogs had escaped to spoil the sport. As the boys lounged chattering back toward the rancheria their course lay between two clumps of the usual desert shrubbery, so placed that when the first was obliquely left and 40 or 50 feet distant from them, the other was obliquely right and 100 feet away. At this point a bevy of small birds (perhaps blackbirds—at any rate corresponding to blackbirds in size and flight) fluttered suddenly out of the nearer clump toward the more distant one, when, too instantaneously for the untrained eye to catch exchange of signal or beginning of movement, the boys lunged forward in a common effort to seize the birds; and though none were entirely successful, one exultantly displayed a tuft of feathers clutched by his fingers as the bird darted into and through the thorny harbor. When the distances were paced it was found that, although the birds had the advantage of the start, the boys covered at least 90 per cent of their distance in the same time; while the spontaneity of the impulse demonstrated habitual chase of flying game under fit conditions.

While obtaining the Seri vocabulary with Mashém's aid, advantage was taken of every opportunity to secure collateral information concerning the actual use of the terms, and thereby of gaining insight into the tribal habits. Through his naive explanations, usually repeated and corroborated by the elderwoman of the Turtle clan (Juana María) and others of the tribe, it was learned that half-grown Seri boys are fond of hunting hares (jack-rabbits); that they usually go out for this purpose in threes or fours; that when a hare is started they scatter, one following it slowly while the others set off obliquely in such manner as to head it off and keep it in a zigzag or doubling course until it tires; and that they then close in and take the animal in their hands, frequently bringing it in alive to show that it was fairly caught—for it is deemed discreditable, if not actually wrong, to take game animals without giving them opportunity for escape or defense by exercise of their natural powers. Similarly, Mashém described the chase of the bura and other deer as ordinarily conducted by five persons (of whom one or two may be youths), who scatter at sight of the quarry, gradually surround it, bewilder it by confronting it at all points, and finally close in either to seize it with their hands, or perhaps to brain it with a stone or short club; the former being held the proper way and the latter a partial failure. This hunting custom, described as a commonplace by Mashém, is established by the vaqueros who had frequently witnessed it from a distance; and the same extra-tribal observers described still more striking feats of individual Seri hunters: Don Manuel, son of Señor Encinas, and Don Ygnacio Lozania were endeavoring to train to work a robust Seri (one of a band sojourning temporarily at Costa

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291 erty even transcending the poor apparel, flimsy habitations, and generally ill-developed artifacts of the lowly tribe.

[237] The most prominent personal possession is the pelican-skin robe; it is usually made of six skins, slightly dressed and in full plumage, sewed together with sinew in a conventional pattern of such sort as to give the greatest possible expanse consistent with the irregular outlines of the individual skins, and at the same time to display a conventional color pattern on the feathered side, the colors ranging from the dorsal slate to the ventral white of the fowl (as indicated in plate XXIII); sometimes there are only four skins and rarely there are eight, but the conventional arrangement is maintained. Before the beginning of a

[301] [824]

FIG. 8—Dried flower necklace.

[177] fairly regular barter at Rancho de Costa Rica, and hence before the introduction of manta and other stuffs, the pelican-skin robes were supplemented by kilts made of mesquite root or other fibers, spun and twisted

[266] in the fingers and woven probably on some primitive device no longer in use; but so far as is known these native fabrics were devoid of decorative patterns in color or weave. Less habitually a short wammus or shirt, with long sleeves, made of a material similar to that of the kilt, was worn; but it, too, was without ornamentation, so far as can be ascertained. The remaining article of utilitarian apparel is the belt, usually consisting of a strip of skin (of deer, rabbit, peccary, etc), slightly dressed with the hair on; frequently this is replaced by a cord or braided band of human hair, while the favorite belt of some of the

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29 young warriors is a snake skin (such as that illustrated in figure 7); but so far as was seen the belts are not extended into tassels, decorative appendages, or even flowing ends.

30 The presumptively decorative costumery observed is limited to necklaces, usually of strung seeds, shells, and beads of wood or bone (figures 8, 9, 10, 11, 12, and 13), though animal appendages, such as hoofs, teeth, etc, are sometimes worn. The most highly prized necklace found at Costa Rica was a human-hair cord with nine crotalus rattles attached (figure 14), worn by a young warrior of the Rattlesnake (?) clan. Not the slightest indication of headdresses was seen (though deer and lion masks are said by Hardy to have been worn on occasions); there were no bracelets, leg-bands, or rings of any description, and the cheap jewelry given to many of the women and youths at Costa Rica was either strung about the neck or concealed; while it is significant that even the showiest jewelry was less appreciated than bits of manta or lumps of sugar. When it is remembered that the Seri have been in occasional contact with Caucasians for over three and a half centuries, the fact that not a single glass bead was found among them becomes significant: and the significance of the simple fact is increased by the virtual absence of that persistent desire and protean use for beads—or beadsense—so prominent among most primitive tribes.

FIG. 8.—Seed necklace.

Fig. 10.—Nut pendants.

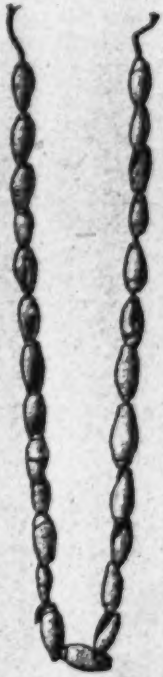

FIG. 11.—Shell beads.

FIG. 12.—Wooden beads.

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Naturally the conditions at Costa Rica were unfavorable to the study of native ideas concerning apparel. The women and some of the children were arrayed chiefly in cast-off habiliments of the rancheras or in nondescript rags, while the men either aped Mexican fashions, like Maahém, or shamefacedly sweltered under the unaccustomed burden of tatterdemalion gear; yet there was a meaningful absence of that desire for finery so prominent among primitive peoples—a fact quite as eloquent in itself as the absence of bracelets and bangles, tassels and trappings. It is probable that the shamans and mystery-bedged crones in the depths of Seriland enhance their influence by the aid of symbolic paraphernalia (indeed, some inkling of such customs is found in the meager records of earlier visitors);[1] yet the conspicuous feature of Seri costumery is the dearth of decorative devices.

FIG. 13—Necklace of wooden beads.

The habitations of the tribe are the simplest of jacales—mere bowers, affording partial protection from sun and wind, but not designed to shed rain or bar cold. Half a dozen of these were examined at Costa Rica in 1894 and probably a hundred more, in various stages of habitability, in Seriland proper in 1895, yet not the slightest trace of decoration was observed—the structures are plainly and barrenly utilitarian in every feature. The same may be said of the balsas in which the Seri navigate their stormy waters; for the peculiarly graceful curves of the craft evidently stand for nothing more than the mechanical solution of a complex problem in balanced forces, wrought out through the experience of generations, while the simple reed bundles are absolutely devoid of paint, of superfluous cord, of fetishistic appendages or markings, of tritons, nereids, or other votive symbols at bow or stern, and of industrially superfluous features or attachments in general—indeed, the only appendages discovered were one or two simple wooden marlinspikes (shown in figure 26), thrust among the reeds to be at hand in case of need for repairs.

Among the utensils employed in the primitive householdry of the Seri the most conspicuous and at the same time the most essential is the olla, or water-jar. Its technical features are described elsewhere; but it may here be noted that the olla is the central artifact about which the very

[1] Hardy noted the use of "a small leathern bag, painted and otherwise ornamented", as a medicine rattle (Travels, p. 282), and also described a wind-symbol and an effigy used for thaumaturgic purposes (ibid., pp. 284, 286).

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mouly the carapace and the longer bones from the flippers of the larger specimens are preserved entire for other uses, and are cleaned only by teeth and talons and tongues, aided by time but not by fire; but the plastron, unless broken up and consumed immediately, is subjected to a cooking process in which it serves at once as skillet and outlet—it is laid on the fire, flesh side up, and at intervals the shriveling tissues are clawed off and devoured, while at last the scorched or charred scutes themselves are carried away to be eaten at leisure.[1]

Perhaps the most significant fact connected with the Seri turtle-fishing is the excellent adaptation of means to ends. The graceful and effective balsa is in large measure an appurtenance of the industry; the harpoon is hardly heavier and is much simpler than a trout-fishing tackle, yet serves for the certain capture of a 200-pound turtle; and the art of fishing for a quarry so shy and elusive that Caucasians may spend weeks on the shores without seeing a specimen is reduced to a perfection even transcending that of such artifacts as the light harpoon and fragile olla. Hardly less significant is the nonuse of that nearly universal implement, the knife, in every stage of the taking and consumption of the characteristic tribal prey; for it may fairly be inferred that the comparative inutility of the knife in dissevering the hard and horny chelonian derm, and the comparative effectiveness of the shell-breaking and bone-crushing hupf, have reacted cumulatively on the instincts of the tribe to retard the adoption of cutting devices. Of much significance, too, is the limited cooking process; for the habitual consumption of raw flesh betokens a fireless ancestry at no remote stage, while the crude cooking of (and in) that portion of the shell not consecrated to other uses might well form the germ of broiling or boiling on the one hand and of culinary utensils on the other hand. On the whole, the Seri turtle industry indicates a delicate adjustment of both vital and activital processes to a distinctive environment, in which the abundant chelonian fauna ranks as a prime factor.

Analogy with other primitive peoples would indicate that the flesh of the turtle is probably tabu to the Turtle clan, that the consumption of the quarry is preceded by an oblation, and that there are seasonal or other ceremonial rites connected with turtle-fishing; but no information has been obtained on any of these points save a few vague and unwilling suggestions from Mashém tending to establish the analogy.

Flotsam and stolen metal have played a rôle in the industries of Seriland so long that it is difficult to learn much of the turtle-fishing

[1] These details were furnished largely by Mashem and Señor Encinas, but were verified in essentials by personal observation of dietetic customs at Costa Rica in 1894; and they were corroborated by observations on both shores of El Infiernillo and Bahía Kunkaak in 1895. Especially significant were the remnants of a turtle feast on the southern beach of Punta Miguel interrupted by the approach of the exploring party. The indications were clear that the turtle had been landed and largely consumed before the fire was kindled, and that the cooking of the firmer portions had hardly been commenced before the camp was abandoned so hurriedly that not only the nearly eaten turtle and the glowing embers, but the harpoon (the specimen illustrated in figure 20), the still bloody and greasy hupf (that represented in plate LIV), and the fire-sticks were left behind. Gnawed fragments of charred plastrons are common relics about hastily abandoned camps generally.

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during prenatal times; but an intimation from Mashém that the old men thought it much better to take the turtle with the teeth of an "animal that goes in the water", and the similarity in terms for "harpoon" (or arrow) and "teeth" both suggest that the aboriginal point may have been a sea-lion tooth, and that the foreshaft itself may have been a larger tooth of seal or cetacean. While the modern harpoon is shaped with the aid of metal (hoop-iron, etc.), the forms are quite evidently vestigial of knifeless manufacture, in which a naturally rounded or abraded or fire-shaped foreshaft was fitted into the natural socket afforded by a cane-stalk broken at its weakest point—i. e., just below the joint; and both function and socket arrangement (as well as the linguistic evidence) strongly suggest the cylindrical tooth as the germ of the apparatus.

It is probable that water-fowl, considered collectively, stand second in importance as Seri prey; and the foremost fowl is undoubtedly the pelican, which serves not only as a fruitful food-supply but as the chief source of apparel.

The principal haunt and only known breeding ground of the pelican in the Gulf of California is Isla Tasane, an integral part of Seriland; and while the great birds are doubtless taken occasionally in Bahia Kunkaak, El Infiernillo, Bahia Tepoka, and other Seri waters, this island is the principal pelican hunting ground. According to Mashém's account, the chase of the pelican here is a well-organized collective process: at certain seasons, or at least at times deemed propitious by the shamans, pelican harvests are planned; and after some days of preparation a large party assemble at a certain convenient point (presumably Punta Antigualla) and await a still evening in the dark of the moon. When all conditions are favorable they set out for the island at late twilight, in order that it may be reached after dark; on approaching the shore the balsas are left in charge of the women, while the warriors and the larger boys, armed only with clubs, rush on the roosting fowls and slaughter them in great numbers—the favorite coup de grâce being a blow on the neck. The butchery is followed by a gluttonous feast, in which the half-famished families gorge the tenderer parts in the darkness, and noisily carouse in the carnage until overcome by slumber. Next day the matrons select the carcasses of least injured plumage and carefully remove the skins, the requisite incisions being made either with the edge of a shell-cup or with a sharp sliver of cane-stalk taken from an injured arrow or a broken balsa-cane. The feast holds for several days, or until the last bones are picked and the whole party sated, when the clans scatter at will, laden with skins and lethargic from the fortnight's food with which each maw is crammed.

Mashém's recital gave no indication as to whether the Pelican clan participate in the hunting orgies, though it clearly implies that the chase and feast are at least measurably ceremonial in character; and this implication was strengthened by the interest and comparative

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strong wrench on the horns or stunned with a blow of war-club or hupf, as conditions may demand. Straggling swine and wandering dogs are occasionally ambushed or stalked and transfixed with arrows, torn hurriedly into fragments, or shouldered and carried off struggling, as exigency may require; while sheep and goats are practically barred from the entire Seri frontier because of their utter helplessness in the face of so hardy huntsmen.

The quantity of stock consumed by the Seri varies greatly with the policy of rancheros and vaqueros. At different times during the last two and a half centuries it has been estimated that the chief portion of the subsistence of the tribe was derived from stolen stock, and it is probable that during the early period of the Encinas régime this

FIG. 23—Desiccated pork.

estimate was fair; but under the Draconian rule of a Seri head for each head of slaughtered stock, the consumption is reduced to a few dozen head annually, including superannuated, crippled, and diseased animals unable to keep up with the herds, those bogged in Playa Noriega and other basins during freshets, the stallions and bulls slain in strife for leadership of their bands, and the festering or semimummied carcasses gladly turned over by idle rancheros on the chance visits of Seri bands to the frontier (such as the specimen in the photograph reproduced in figure 23).

No special devices have been developed in connection with the chase for stock, nor has material progress been made in acquiring Caucasian devices. There are, indeed, indications of a disposition to use

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177 224 knives in severing the tough integuments and tendons of horses and kine, although the tendency has not yet resulted (as elsewhere noted, ante, pp. 153–154) in the development of a knife-sense; and although boys on the frontier play at roping dogs, no effort to use the riata or any form of rope is made in the actual chase. As naively explained by Maahém amid approving grunts from his clan-mates, they have no time for ropes or knives when hungry.

262 A quantitatively unimportant yet by no means negligible fraction of the normal diet of Seriland is vegetal; and while the sources of vegetal food are many and diverse, the chief constituent is a single product characteristic of American deserts, viz, the tuna; or prickly pear.

222 All of the cacti of the region yield tunas in considerable quantity. The pitahaya is perhaps the most abundant producer, and its name is often given to the fruit; the huge saguaro affords an enormous annual yield, and the still more gigantic saguesa is even more prolific, especially in its immense forests along the eastern base of Sierra Seri; the cina adds materially to the aggregate product, while the nopal, or common prickly pear, contributes a quota acquiring importance from the facility with which it may be harvested. The fruits of all these cacti are sometimes classed as sweet tunas, in contradistinction from the sour tunas yielded in great abundance by the cholla and consumed with avidity by stock, though seldom eaten by men. The edible tunas average about the size of lemons, and resemble figs save that their skin is beset with prickles. The portion eaten is a luscious pulp, filled with minute seeds like those of the fig save that they are too hard for mastication or digestion, its flavor ranging from the sickly sweet of the overcultivated fig to a pleasant acidity. While occasional tunas may be found at any time during the year, the normal harvest occurs about midsummer, or shortly before the July-August humid season, and lasts for several weeks. During the height of the season the clans withdraw from the coast and give undivided attention to the collection and consumption of the fruits, gorging them in such quantities that, according to the testimony of the vaqueros, they are fattened beyond recognition. Commonly the tunas are eaten just as they are gathered, and the families and larger bands move about from pitahaya to pitahaya and from valley to valley in a slovenly chase of this natural harvest, until waning supply and cloying appetite drive them back to the severer chase of turtle and pelican. The fruit is not cooked, and never preserved save in the noisome way of nature, and is rarely transported in quantities or over distances of industrial importance; yet the product may have some connection with the basketry of the tribe. The devices for collecting the fruits, especially from the lofty saguaro and saguesa, are mere improvisations of harpoon shafts, paloblanco branches, or chance cane-stalks carried primarily for arrow-making or balsa construction. [412]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ary sense-effects (as when the sense of smell is intensified by exercise of the organs of taste), or, in another direction, by the habit of the youthful penman who shapes his letters by aid of lingual and facial contortion; yet it is a characteristic of primitive life—one doubtless due to the interrelations of psycho-physical functions—to not only employ but to greatly exalt vocal formulas associated with manual activities, so that words, and eventually *the* Word, acquires a mystical or talismanic or sacred significance pervading all lower culture—indeed the savage shaman is unable to work his marvels without mumbled incantations ending in some formulated and well-understood utterance, and his practice persists in the meaningless mummery and culminating "presto" of modern jugglery. So, viewed in the light of psycho-physical causes and prevalent customs connected with vocal formulas, it would seem probable that the conventional features of the Seri jacales are crystallized in the tribal lore quite as effectually through the associated work-chants as through direct memory of the forms and structures themselves. And the simple runes chanted in unison by Seri matrons engaged in bending and lashing their okatilla house-bows apparently define a nascent stage in the development of the elaborate fiducial house-building ceremonies characteristic of various higher tribes; for the spontaneous vocal accompaniment tends naturally to run into ritual under that law of the development of myth or fable which explains so many of the customs and notions of primitive peoples.[1]

APPARELING

Slightly as they have been affected by three centuries of sporadic contact with higher culture, the Seri reveal many marks of acculturation; and the most conspicuous of these are connected with clothing, especially on the frontier, where women and even warriors habitually wear a livery of subserviency in the form of cast-off Caucasian rags (as illustrated in most of the photographs taken at Costa Rica). Even in the depths of Seriland the native fabrics are largely replaced by white men's stuffs, obtained by barter, beggary, and robbery; yet it is easy to distinguish the harlequin veneer of borrowed trappings from the few fixed types of covering that seem characteristic.

The most distinctive piece of apparel is a kilt, extending from waist to knees, worn alike by men and women and the larger children. Aboriginally it was either a birdskin robe or a rectangle of coarse textile fabric, secured at the waist by a hair-cord belt; acculturally it is usually a rectangle of manta (course sheeting) or other stuff, preferably cotton or linen but sometimes woolen, fastened either by tucking in the corners or by a belt of cord. Good specimens of the acultural cloth kilt worn by men and larger boys are illustrated in plates XVI

[1] The law of fable in its relation to primitive surgery is formulated in the Sixteenth Ann. Rep. Bur. Am. Eth., 1897, p. 22.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and XIX; the birdskin kilt (put on for the purpose) is illustrated in plate XVIII, while the aboriginal fabric is fairly represented in plate XXIX. Although ordinarily worn as a kilt, the same article (temporarily replaced by an improvised substitute) serves other purposes at the convenience of the wearer; in the chase for tunas and for moving game it becomes a bag or pack-sheet; in case of cold rain it is shifted to the shoulders or the exposed side; during the siesta it is elevated on a shrub and a stick to serve as a canopy; at sleeping time generally it forms (especially when of birdskin) a bed, i. e., a combined mattress and coverlet; and in attack or defense the pelican skin is at once standard, buckler, and waving cape to confuse quarry or enemy after the manner of the toreador's cloak. 291 [177] [482] [513]

An almost equally distinctive garment is a short shirt or wammus, with long sleeves, worn by men and women but not by children; ordinarily it covers the thorax, missing connection with the kilt by a few inches, and so affording ventilation and space for suckling the teeming offspring. Unlike the kilt, it is an actual garment, fitted with sleeves and fastened in front with hair-cord strings. Although the Seri wammus corresponds fairly with a Yaqui garment, it seems practically certain that it is of local aboriginal design, and that it was made primitively of haircloth or native textiles (as illustrated in plate XXIX) and worn rather ceremoniously; but latterly it is made of manta and is worn habitually (at least by the women and on the frontier), though cast aside in preparation for any special task or effort—i. e., it is not connected with pudency-sense, save to a slight degree in the younger women. The form, function, and prevalence of the wammus are illustrated by the group shown in plate XIII, in which nearly all of the thirty-odd adults wear the garment. [171] [177]

These two articles constitute the ordinary wearing apparel of the Seri, though they are commonly supplemented (especially when both are of manta) by a pelican-skin robe, which is habitually carried to serve as bed or mackintosh, according to the chance of journey and weather, or as a shield in sudden warfare. No head-covering is used, save in the ceremonial masquerade, when the heads of animals are worn as masks,[1] or in aping Caucasian customs, especially on expeditions for barter (as illustrated in plate XII). Loose trousers of Mexican pattern are sometimes put on at frontier points, but are discarded in Seriland proper, save by Mashém, who maintains prestige partly by this borrowed badge of Caucasian superiority. Leggings and moccasins are eschewed, naturally enough, since they would afford little protection from the sharp spalls and savage thorns of the district, and would give lodgment for the barbed spines inevitably gathered in rapid chase or flight over cactus-dotted stretches; and the only foot-covering seen (save Mashém's boots) was a single sandal made from the rough skin of a turtle-flipper, apparently for ceremonial rather than practical use. [177]

[1] Hardy (Travels, p. 78) describes the ceremonial wearing of the heads of deer with horns attached.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

291 [177] Of all the party at Costa Rica in 1894 subchief Mashém was the only one who wore Caucasian apparel with any air of comfort and fitness; yet even he, with hat and shirt, boots and breeches, and loose bandana about his neck in cowboy style (plate XVII), did not feel fully dressed without the slender hair-cord necklace of his kin in its wonted place. On the frontier improvised fig-leaves were sometimes put on the children of less than a dozen years (as illustrated by the standing infant shown in plate XIV, who was thus dressed hastily for her picture); and a common garb of the smaller children at Costa Rica, as they played about the rancheria or wandered in directions away from the white

[412] [854]

FIG. 29.—Seri hairbrush.

FIG. 30.—Seri cradle.

man's rancho, was limited to a cincture of hair cord or snake skin, or perhaps of agave fiber, under which an improvised kilt might be tucked on the Caucasian's approach.

281 513 In addition to the individual apparel, each clan, or at least the elder-woman or her fraternal executive, accumulates some surplus material as opportunity offers, and this serves as family bedding until occasion arises for converting it to other uses. Of late the prevailing materials are pelican skins, lightly dressed and joined into robes by sinew stitching; deerskins, dried or partially dressed; cormorant skins, treated like those of the pelican; seal skins, usually fragmentary; peccary skins,

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

said discarded hupfs, a broken fictile figurine, etc), was the still ruder arrowpoint represented in figure 37*b* (both figures are natural size). The specimens are nearly identical in material—a jet-black slaty rock with a few lighter flecks interspersed, weathering gray on long exposure (as is shown by the partly natural surface of the larger point); similar rock abounds in several easterly spurs of Sierra Seri. The smaller specimen was evidently finished and used; its features indicate fairly skilful chipping, though its general form is crude—in addition to the asymmetric shouldering, the entire point is curved laterally in such manner as to interfere with accurate archery. The larger specimen is still more strongly curved laterally, and the chipping is childishly crude; while the rough surface, clumsy tang, and unfinished air indicate that it was never used even to the extent of shafting. It is possible that the specimens may have been imported by aliens, but the probabilities are strong that they were manufactured by the Seri. No other arrowpoints and no chips or spalls suggesting stone arrow-making were found in all Seriland, though the entire party of twelve were on constant lookout for them for a month. The natural inference from these facts is that the ancestral Seri, like their descendants, were not habitual stone arrow-makers.

There is a final category of Seri artifacts which would be classed as distinctive by Caucasians on the basis of material, though they are combined with the stone artifacts by the tribesmen; it comprises arrow-points of hoop-iron or other metal, harpoon-points of nails, spikes, or wire, awls of like materials, and other metallic adjuncts to ordinary implements. The use of iron is of course post-Columbian, and its ordinary sources are wreckage and stealage. The date of introduction is unknown, and probably goes back to the days of Cortés and Mendoza; certainly the value of metal was so well understood in 1709 that when Padre Salvatierra's bilander was beached in Seriland the tribesmen at once began to break her up for the nails (ante, page 67); yet the metal is wrought cold and only with hupf and abat like the local materials, and is habitually regarded and designated as a stone. By reason of the primitive methods of working, the metals are of course available only when in small pieces or slender shapes. There is a tradition among the vaqueros of the frontier that a quantity of hoop-iron designed for use in making casks was carried away from a rancheria in the vicinity of Bacanchito during a raid in the seventies, and that this stock has ever since served to supply the Seri with material for their arrowpoints; but it is probable that the chief supply is derived from the flotsam swept into the natural drift trap of Bahia Kunkaak by prevailing winds and tidal currents, and cast up on the long sandspit of Punta Tormenta after every storm. A surprising quantity and variety of wreckage was found on this point, and thence down the coast to Punta Narragansett, by the 1895 expedition: staves and heads of casks broken up after beaching, a telegraph pole crossbar which had evidently

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

177 brought in a cargo of large wire, and a piece of door-frame with heavy
502 strap-iron hinges attached with screws, were among the troves of the tribesmen within a few weeks; and it was noted that while even the hinge screws and the tacks attaching tags to the cask-heads had been extracted by breaking up the wood, the roughly forged hinges of 2 by ½-inch wrought iron had been abandoned after a tentative battering with cobbles, and lay among the refuse stones about the jacales.

412 A rough census of the stone implements of Seriland is not without interest, even though it be no more than an approximation. Some 20 or 25 habitable and recently inhabited jacales were visited, with about twice as many more in various stages of ruin, fully two-thirds of these being on the island; and at least an equal number of camps or other houseless sites were noted. About these 150 jacales and sites there were, say, 50 ahsta, ranging from nearly natural bowlders to the comparatively well-wrought specimen illustrated in plate XXXIX, and an equal number of cobbles used interchangeably as ahsta and hupfs; there were also 200 or 300 pebbles bearing traces of use as hupfs, of which about a third were worn so decidedly as to attest repeated if not regular use; while no flaked or spalled implements were observed save the two doubtful examples illustrated in plates XLVII and L, and only two chipped arrowpoints. It may be assumed that the sites visited and the artifacts observed comprise from a tenth to a fifth of those of all Seriland, in addition to, say, 75 finished hupfs habitually carried by Seri matrons in their wanderings; and it may be assumed also that 50 or 100 metallic harpoon-points and several hundred hoop-iron arrowpoints are habitually carried by the warriors and their spouses.

[324] The most impressive fact brought out by this census is the practical absence of stone artifacts wrought by flaking or chipping in accordance with preconceived design; excepting the exceedingly rare arrow-points there are none of these. And the assemblage of wrought stones demonstrates not merely that the Seri are practically without flaked or chipped implements, but that they eschew and discard stones edged by fracture whether naturally or through accident of use.

Summarily, the Seri artifacts of inorganic material fall into three groups, viz: (I) The large and characteristic one comprising regularly-used hupfs and ahsta, with their little-used and discarded representatives; (II) the small and aberrant group represented by chipped arrow-points, and (III) the considerable group comprising the cold-wrought metal points for arrows and harpoons and awls—though it is to be remembered that the Seri themselves combine the second and third of these groups.

I. On reviewing the artifacts of the larger group it becomes clear (1) that they immediately reflect environment, in that they are characteristic natural objects of the territory; (2) that they come into use as implements through chance demands met by hasty selection from the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

abundant material; (3) that the great majority of the objects so employed are discarded after a use or two; (4) that when the object proves especially serviceable, and other conditions favor, it is retained to meet later needs; (5) that the retained objects are gradually modified in form and surface by repeated use; (6) that if the modification diminishes the serviceability of the object in the notion of the user (e. g., by such fracture as to produce sharp edges), it is discarded; (7) that if the modification enhances the serviceability of the specimen in the mind of the user it is the more sedulously preserved; and (8) that through the instinctive desire for perservation, coupled with the thaumaturgic cast of primitive thinking, the object acquires at once an artificialized form and a fetichistic as well as a utilitarian function. The significant feature of the development is the total absence of foresight or design, save in so far as the concepts are fiducial rather than technical or directly industrial.

II. On reviewing the almost insignificantly small group of chipped stone artifacts, it seems clear that while the material is local the design is so incongruous with custom and characteristic thought as to raise the presumption that stone-chipping is an alien and imperfectly assimilated craft. The conspicuous and significant feature of the chipped stone artifact is the shapement in accordance with preconceived design.

III. On reviewing the arbitrarily separated group of metallic artifacts it is found clear (1) that the material is foreign; (2) that it is avidly sought and sedulously saved and utilized; (3) that it is wrought only by the crude methods used for fashioning the most primitive of implements and tools; and (4) that it is used chiefly as a substitute for organic substances employed in symbolic imitation of the natural organs and functions of animals. The significant features of the use of iron artifacts are (*a*) the absence of either alien or specialized designs, and (*b*) the mimicry of bestial characters as conceived in primitive philosophy.

Classed by material and motive jointly, the three groups are diverse in important respects: The first is local in material, local in motive; the second is local in material, foreign in design; the third is foreign in material, local in motive.

On recapitulating the several phases of Seri handicraft, the devices are found to fall into genetic classes of such sort as to illumine certain notable stages of primitive technic.

The initial class comprises teeth, beaks and mandibles, claws, hoofs, and horns, used in imitation or symbolic mimicry of either actual or imputed function of animals, chiefly those to which the organs pertain, together with vegetal spines and stalks or splints, used similarly under the zootheistic imputation of animal powers to plants; also carapaces and pelts, used as shields combining actual and symbolic protective functions. While this class of devices is well displayed by the Seri, it is by no means peculiar to them; clear vestiges of the devices have

1; McGee E-5 (1894-1895)1898 NU31 Seri NU31

is an infallible remedy. On the whole it seems probable that the yerba mala (*Sebastiana bilocularis?*), or yerba de flécha, or mago, or magot, yielded or formed the standard arrow-poison of the Opata and perhaps of other Indians, and that the ill-repute of the shrub survived and spread throughout Mexicanized Sonora in such frequent repetition and common belief as to affect the ideas of residents and travelers alike; but it seems equally probable that the magic-inspired brew of the Seri is entirely distinct.[1]

As suggested by widespread primitive customs, and as illustrated specifically by the arrow-charming, the warfare of the Seri is largely sortilegic, this feature being but an extension and magnification of a corresponding feature of their hunting customs. The economic object of the chase is, of course, the flesh of the quarry; but the hunt normally begins with invocatory or other fiducial ceremonies, culminates in a feast opened with oblations, and ends in the use of horns or hoofs, teeth or bones, mane or tail, as talisman-trophies—primarily pledges of fealty to the favorable potencies, only secondarily symbols of success. The observances illumine the ever-present esoteric object of the chase, which is to gain the favor or overcome the power of the beast-god represented by the animal hunted; in general, this is sought to be effected through mimetic movements, or symbolic objects, associated with that animal-kind, and the retained charm-trophy is valued as a symbol of the placation or outwitting of a particular deity. Similarly, the Seri warrior strives for the supposed deific symbols of the enemy—the scalp or headdress or arrow of the alien tribesman, the fire-breathing and echo-waking (as well as death-dealing) wand of the Caucasian; and the Papago arrows, Yaqui scalps, and white man's firearms are sought avidly, treasured as fetishes, and often carried conspicuously as badges of borrowed prowess.[2] So the Seri are never without alien insignia in the form of weapons. The day before the 1895 expedition entered their stronghold, a band of warriors and women were frightened from a freshly slaughtered cow by a party of vaqueros so suddenly that their arms were left behind—and these

[1] It should be noted that the actuality of the poisonous property ascribed to the yerba mala is in some degree questionable; the plant is the only one of southern Papagueria yielding suitable material for arrow-shafts, and it is possible (if not probable) that it was consecrated to this purpose by the aboriginal Opata and protected by taboo in such wise as to become a sacred and fearsome thing. It is accordingly by no means improbable that the reputed poisonous property is but the product of generations of association, and that the plant is really harmless—an inference supported by experiments on the part of the leader of the 1895 expedition, who swallowed the juice of stem and leaves in two or three minute but increasing doses without perceptible effect. On the other hand, it should be observed that the region is one abounding in toxic juices, and that this shrub is so luxuriant and so free from thorny armament and other protective devices of a mechanical sort as to raise the presumption that it must be protected against herbivorous animals, at least, by chemical constituents of some kind (cf. ante, p. 35).

[2] These motives on the part of the Seri were misrepresented by their tribal comrades: a Papago fetish in the form of an Apache arrowpoint, long worn by an aged warrior as a protection from Apache arrows, was among the spoil of the 1894 expedition; and a "poisoned" Seri arrowhead and foreshaft, worn by a superannuated Papago "doctor" as a badge of invulnerability to similar missiles, was confidently shown to the 1895 expedition, but was held above price by its wearer—and this despite the fact that he had been christianized for decades, and retained no other pagan symbols.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

177 included a heavy Springfield "remodeled" rifle, lacking not only ammu-
411 nition but breechblock and firing pin; while Don Andrés Noriega, of
726 Costa Rica, and L. K. Thompson, of Hermosillo, described a rifle of modern make captured similarly two years before, which was in good working order and charged with a counterfeit cartridge ingeniously fashioned from raw buckskin in imitation of a center-fire brass shell and loaded with a polished stone bullet.[1] The finders opined that the rifles were carried to bluff the enemy, and even that the counterfeit cartridge was designed to do deadly execution; but it would better accord with Seri customs, and with the law of piratical acculturation which they typify,[2] to infer that the weapons were regarded rather as symbols of mystical potencies than as simple scarecrows. Of related import were two or three pseudomachetes made from rust-pitted cask hoops, reported by the majordomo and several vaqueros at Costa Rica; and of still greater significance was a machete picked up in a just-abandoned jacal by Don Ygnacio Lozania—veteran of the Andrade expedition and the Encinas conquest—which was laboriously rasped and scraped out of paloblanco wood, colored in imitation of iron blade and mahogany handle by means of face-paints, and even furnished with "eyes" replacing the handle-rivets, in the form of embedded iron scales. Some of the Seri are familiar with the normal use of firearms, as was demonstrated by the Robinson and other episodes, and many of them modernly make some use of machetes or other knives, as shown by various rudely whittled wooden artifacts; yet the burden of proof indicates that the chief use of the Caucasian's weapons in the heat of actual warfare is shamanistic and symbolic. This interpretation is, in fact, practically established by the experience of the frontier; for the vaqueros and local soldiery have little fear of the ill-understood firearms and clumsily handled machetes occasionally seen in Seri hands, though they dread unspeakably the necromantic arrows and flesh-rending teeth with which the agile foes are credited.

174 The mystical potency ascribed to Caucasian firearms and cutlery by
324 the zoomimic tribesmen is of interest as a reflection of motives and methods pervading the entire range of their activities; at the same time it suggests the genesis of the aberrant technolithic craft displayed in arrow-chipping. The information obtained from Mashém and his mates concerning chipped arrowpoints implied that the process was hieratic and little understood by the body of the tribe, its place in the tribal knowledge, indeed, being similar to that of the brewing of the arrow "poison", which is the special work of shamans; and this information, comporting as it does with the rarity of the chipped points and

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[1] The imitative skill of the Seri was illustrated at Costa Rica some years ago, when the petty accounts for labor, etc., were kept by means of tokens stamped from sheet brass. While a Seri rancheria was maintained near the ranchu, the storekeeper detected a number of counterfeits of his tokens, so well executed as to pass readily over the counter in ordinary exchange—and after extended detective work the counterfeiting was traced to the rancheria.

[2] American Anthropologist, vol. 11, August, 1898, pp. 313-315.

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000 and groups; the linguistic activities serve to extend social relations in space and time, and the sophic activities to integrate and perpetuate all relations; but it is through the industrial activities that human intelligence interacts with physical nature and makes conquest of the material world. Accordingly, industries act as a steady and never-ceasing stimulus to intelligence; accordingly, too, the industrial activities afford the simplest and surest measure of intellectual advancement.

Under this view of the place of industrial activities in human phylogeny, certain phases of Seri technology acquire importance and especial significance.

105 177 1. One of the most conspicuous features of Seri craft is its local character. The foodstuffs, the materials for apparelling and habitations, and the substances utilized in the several lines of simple handicraft are essentially local; moreover, the characteristic methods and devices evidently reflect local environmental conditions. There are, indeed, a few phenomena suggesting, and a still less number demonstrating, extraneous origin; the balsa and the kilt are sufficiently similar to devices of other districts to suggest, though not to prove, genetic identity (indeed, the sum of indications of local origin is much weightier than the several suggestions of extraneous derivation); the iron harpoon-points and arrow-tips are mainly of local flotsam, and are essentially provincial in modes of employment; the chipped stone arrow-tips, though local in material, are foreign in motive; but on summarizing the industrial phenomena, it would appear that by far the greater share are essentially local, while the few of exceptional (and extraneous) character can be pretty definitely traced to importation through the social interactions of recent centuries.

105 182 13 2. An equally conspicuous feature of the industrial craft of the Seri is the dominance of chance in both processes and devices. The traditional "fisherman's luck" is made exceptionally uncertain by the sudden gales and shifting currents of Seriland shores, while the absolute necessaries of life on land are still more capricious than those along-shore; this uncertainty of resources has profoundly affected the somatic features of the tribesman, as indicated elsewhere (ante, p. 159); and that the mental attributes of the folk are even more profoundly affected is attested by the rôle played by chance in the selection and shapement of the prevailing tools of stone and shell. The large rôle of chance in Seri life is also revealed, though less directly, in the overweening [771] mysticism of zoötheistic faith, with its material reflection in zoömimic craft.

3. When the local and fortuitous features of the Seri industries are juxtaposed they are found to express a notably inchoate or primitive stage of industrial development. In both the local and the fortuitous or accidental aspects, the activities are so closely adjusted to the immediate environment as to approach the instinctive agencies and movements of bestial life, and correspondingly to diverge from the composite

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

and cosmopolite characters of higher humanity; the dearth of extraneous devices denotes absence or intolerance of that acultural interchange accompanying and marking the progress of peoples; and the dearth of inventions denotes feebleness of creative faculty and absence of that self-confidence which accompanies and measures progress in nature-conquest. 105 13 182 [177]

4. When the local and fortuitous features of the Seri craft are viewed in their serial or sequential relations, they are found to reflect and attest autochthonal development. Excepting the few acultural processes and devices whose acquisition may confidently be traced to certain social interactions of the historic period, the Seri technic is too closely tied to local environment to warrant any supposition of importation from other districts. The question of the birthplace of the people may be left open in this case as in every other; but the birthplace of practically all those activities and activital products which define the folk as human was manifestly Seriland itself—so that the tribe, considered as a human folk rather than as a zoic variety, must be classed as autochthonous. 105 177

Summarily, then, the Seri industries are significant as (1) local, (2) fortuitous, (3) primitive, and (4) autochthonous; and these features combine to illumine a noteworthy stage in primitive thought. 105

5. On juxtaposing these significant features of Seri technic, they are found to reflect the tribal mind with noteworthy fidelity, and hence to indicate the sources of Seri mentations, and of the local culture in which these mentations are integrated. The local foodstuffs—especially that vital standard of values in arid regions, water—are periodic sources of the strongest aspirations and inspirations of industrial life, and the methods and devices for food-getting are but the legitimate offspring of the inevitable relation between effort and environment; the conspicuous rôle of chance is but the composite of the hard and capricious environment on the one hand, and of the lowly thought reflecting that environment on the other hand; the zoic faith into which the magma of recurrent chance has semicrystallized finds carnate symbols either in local beasts or in fantastic monsters suggested by those beasts; even the mating instinct, second only to thirst among the impelling action-factors of the folk, is so profoundly and bitterly provincial as to exclude foreign ideals to a degree unparalleled among known peoples. The industrial materials are local—but not more local than the thoughts in which they are reflected; the technical methods are unmistakably the offspring of the environment—but they are equally the offspring of minds reflecting that environment and no other; the few and simple devices stand for integrations of experiences, instinctive rather than ratiocinative, the germ of invention rather than even its opening bud—but the experiences bear the marks of that environment and no other. Accordingly, the mental side of Seri industry, and, indeed, of all Seri life, appears to be the counterpart of the physical side. 13 181 182

2: Kroeber E-5 (1930) 1931 NU31 Seri NU31

[p.3]

THE SERI

By A. L. Kroeber, *University of California*

Introduction

The present paper is the first product of field studies made between January and March, 1930, in Arizona, Sonora, and Sinaloa, under a joint expedition of the Southwest Museum, Los Angeles, and the University of California. The financial contribution of the University was the gift of Mrs. Ethel W. Crocker. While the purpose of the trip was to define rather than solve problems, the following pages contain part of the positive observations obtained.

The Seri, who live on Tiburon Island, Sonora, in the Gulf of California, are often considered the wildest and most primitive tribe surviving in North America. They owe this repute partly to McGee's monograph about them, in the Seventeenth Annual Report of the Bureau of American Ethnology. It is easy to read between the lines of this description that McGee leaned toward a romantic and imaginative interpretation of the Seri. Also, his actual contacts with the people themselves were brief, and hampered by imperfect communication. Moreover, the Seri have been for three hundred years in contact with Spaniards and Mexicans, part of the time even under direct mission control. It therefore seems doubtful whether their backwardness could be the result wholly of preserved primitiveness, and may not rather be attributable to a recalcitrant degeneration. In order to answer this question, and to place Seri culture at least tentatively among the other tribal cultures of the Southwest instead of leaving it as an unexplained and lurid abnormality, a brief visit to them was undertaken.

The success of this visit was due wholly to Sr. Roberto Thomson of Hermosillo and Rancho San Rafael, who is now the Mexican Government's *Jefe de Vigilancia* for the Seris, and in effect what in the United States would be known as Indian Agent for the tribe. He has protected and befriended them, kept them in turn in bounds, and secured some governmental assistance for them, under which they are making a beginning of adaptation to the modern world. At any rate, the mutual raidings and killings have stopped, and the Seri, though still very suspicious of most of the neighboring settlers and of strangers, look upon Sr. Thomson as their protector and friend. Without his introduction and experience, many less data could have been collected in a longer stay.

The Seri now live wholly on Tiburon Island. I was with them six days, half of them on the island. This is about as long a time as McGee spent with them—all of it at the cattle ranch of Costa Rica. McGee also explored the island and its camps at some length, but without encountering any Seri, who eluded his party.

Inasmuch as Mr. Edward H. Davis of Mesa Grande, California, has three times visited Tiburon to form an ethnological collection for the Museum of the American Indian, Heye Foundation, I attempted no examination of Seri material or economic culture, which Mr.

3:Davis & Dawson 2-8 (1933-1960) 1945
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THE SAVAGE SERIS OF SONORA—II*

By EDWARD H. DAVIS AND R. YALE DAWSON

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After the Seris' first contact with the invading white man through Coronado's soldiers in 1540, they lived for nearly another century outside the influence of the civilization that was eventually to engulf them. By the early 17th century, however, pearls were discovered in the Gulf and the sailing ships that began to ply the waters introduced the first great innovation into Seri culture. The Indians found on their beaches boards from these ships and, most important, flotsam hoop-iron and nails. One of the great difficulties in constructing arrows and harpoons had been the fashioning of the point. The stone, tooth, or bone points were difficult to make and more difficult to attach securely to the shaft. The more easily worked iron proved a boon to their hunting and fishing, and later made a more satisfactory weapon of war than they had hitherto possessed.

000 The beginning of Seri wars was the year

* Continued from page 202 of preceding issue.

[p. 261(A)]

648 726 on the settlements of Sonora. Many expeditions, fitted out at great expense, were sent against them, but in that barren land, destitute of water, the military parties suffered greatly in their campaigns, and succeeded little in their efforts to conquer the wary natives.

177 648 By 1850 probably every Seri between infancy and decrepitude had seen the proprietor and other inhabitants of the rancho of Don Pascual Encinas at Costa Rica where the Seris were abnormally tolerated and even encouraged to make themselves useful and unobjectionable. They yielded to indolent scavengering more than ever before; they substituted cast-off rags and barter-bought cotton cloth for their pelican robes and other primitive garments. They ate cooked food when it fell their way; half heartedly they adopted metal cutting implements and sought or stole nails and hoop-iron for arrow [191] points. Some acquired a smattering of Spanish and many came to sport Spanish names. Never, however, did more than one or two Seris come to live in a house, nor even to encompass the idea of making adobe. They had not learned to ride horses nor to burden them, but only to use them for immediate slaughter and consumption. They were acquainted with firearms, but it was not until years later that they learned to use them. In and about Rancho Costa Rica the Seris and the Mexicans lived for a time in mutual tolerance, certain depredations being allowed the Indians just as were the rodents of the rancheria.

648 721 When, in 1855, Don Pascual Encinas experienced the loss of unusually large numbers of stock from Seri raids, he was aroused into announcing that a Seri head would be taken for each head of stock stolen. For a while the Indians seemed to acquiesce, but within a few days a group of Seri women "milled" a band of horses, caught and threw one so that its neck was broken, whereupon [252] they immediately sucked its blood, gorged on its intestines, and buried its quarters to "ripen" according to their custom. The vaqueros of the settlement were instructed to shoot the first Seri seen on the llano. Within two days the tribe was on the war-path and the war raged for a decade.

[p.262(B)]

825 ascribed to whales. Some of the birds are supposed to be migratory, but the direction of their migration is a mystery to the Seris. The swallows "pass in great numbers" but that is all that was known about them. The ducks winter on Isla Patos and then depart for the north in the spring without ever laying any eggs. Hence, their eggs were totally unknown to the informants. Egrets are said to remain in Estero Sargento for the winter.

Sometimes seasonal differences in the appearance of an animal were noted; for example, the loss of horns by the male mule deer during the winter. Seasonal differences are more sharply impressed upon the Seris than on either the Cora or the Sumu. This is not surprising because seasonal changes in Sonora are more contrasting than in either Nayarit or Nicaragua.

Age

The Seris find this feature of animal life the most difficult to ascertain. Hardly any responses were given that could be correlated with the actual length of life. Most replies were standardized according to the individual notions of the informant, such as "4 or 5 years", "about 6 months", and so on. In general, the larger the animal the greater the longevity attributed to it. In many cases it has been suggested that "perhaps the animal dies with the beginning of the cold season". This was frequently said especially in regard to reptiles. There is very little understanding of reptile hibernation through the winter.

Transformation and Immature Stages

No generalized idea of the transformation or metamorphosis of one kind of animal into another has been discovered, with the exception of two instances among the insects. Maggots are correctly associated with flies, but this is not surprising in an encampment where untold millions of them infest offal and other remains. It is also possible that this idea came to the Seris by way of [77] the more sophisticated Mexicans. A hawk moth larva, found in great numbers on the jimson weed, was said to turn into a butterfly within 10 to 20 days if it rained, but if the rains failed, it would continue in its larval stage. These two unconnected cases represent the total knowledge of insect metamorphosis discovered in the course of my field work.

In other animals, the immature individuals are always described as being similar to the adults except for their smaller size. In addition to this, the young of several of the birds were supposed to have differently colored plumage.

Nocturnal and Diurnal Variation

As expected, there is very little knowledge of the activity of fishes, but there is a great deal of accurate knowledge of these phenomena for the mammals, many birds and reptiles. By way of illustration, rattlesnakes and most other snakes are reported as coming out at night and resting in the ground during the day, whereas the opposite is noted for the lizards. They are most active in the brilliant sunshine and go into hiding at night. For many mammals, decreased activity was noted during the day. Peccary, coyote, deer and cottontail were some of the mammals listed.

Class	Species Reported	Species Exploited	Percentages
Mammals	21	9	43
Birds	28	6	21
Reptiles and Amphibians	25	11	44
Fish	43	23	53
Molluscs	36	21	58
Crustaceans	10	2	20
Total:	160	72	45

These figures show clearly the dependence of the Seris on marine life for a major source of their diet. Today, pinta, baya, cabon and sardineta are their primary source of income with meat and sea-turtles ranking second in importance. Several species of clams, limpets and gastropods supplement this diet.

All other animals represent only incidental additions to the menu. During the last war, sharks and mantas were hunted extensively for their liver, then a source of vitamin D. But since the war, the demand for shark liver has declined and because of this, a considerable income for the Seris has been lost. Shark and manta fishing have been abandoned for these fish were taken only for the commercially profitable liver and not for their flesh.

Fishing and Hunting

Seri fishing techniques are simple. In the past they used double-pronged spears and for the larger fish, harpoons. Today the spears are employed chiefly in fishing while the harpoons are reserved exclusively for sea-turtles. Hook and line fishing was introduced after 1930, as Kroeber (1931) saw none during his visit to Kino in 1930, and it is now the standard method of fishing. An abortive and unsuccessful attempt was made several years ago with net fishing. Another change has occurred within the past fifty years. The old balsas have been replaced by flat-bottomed plank boats outfitted with five-horsepower motors or sails. These motors, incidentally, are leased from the Mexican fish traders because none of the Seris are rich enough to own one.

Bait is obtained by dynamiting schools of small fish in coastal waters or by collecting them at low tide in the tidal pools and from under rocks. Fishing usually begins at dawn and lasts until noon when, as a rule, all of the "pangas", as the boats are called, return to Desemboque. In stormy weather no fishing expeditions are made and when this occurs, starvation becomes a real menace. Harpooning of sea-turtles takes place far out in the Gulf. It is done only at night in exceptionally calm weather by the light of torches or Coleman lanterns.

Hunting as it is done today has changed from the time of McGee's visit in 1894-95. The bow and arrow has disappeared completely except for a crude and diminutive form used as a toy by small boys. Iron spears once used in shark and manta hunting are now carried primarily as a weapon against the numerous and much feared rattlesnakes. They are said to be used occasionally in the peccary hunt. Old .22s or 30/30 rifles are owned by several of the men, some of whom specialize in hunting.

825 other snakes are also viewed as venomous but are claimed to be of mild disposition and do not bite people.

Among the lizards, curiously, the one feared most is not the highly poisonous Gila Monster, but the harmless little gekko, Coelonyx variegatus sonorensis, which lives in fallen and dried-up saguaros. The informants could not even be induced to touch specimens killed in alcohol. It is believed [753] that this creature could kill humans either by contact or by allowing them to inhale its vapors which causes a fatal lung illness. This little lizard is reminiscent of the European salamander in some ways. The Mexicans call it ● [771] locally "salamanquesa", and attribute to it the same unpleasant traits which the Seris do. Since this little lizard does resemble the European salamander and the beliefs about it are quite similar to those in European folklore, it is possible that here is a case of a transfer of this folklore upon an animal of a different kind. These beliefs eventually perhaps diffused to the Seris.

A small desert night lizard, Xantusia vigilis, is also very much feared and is frequently confused with the gekko. It lives in an identical habitat. A toad, Bufo alvarius, is said to bite with its tongue and is supposed to be able to inject venom with it. Its blood and "milk" are also very toxic.

Several of the arthropods are believed to be dangerous. The Seris claim that the blood sucking cone-nosed beetle, Triatoma rubida, stings with its mouth parts and also causes an illness called ezxahil i ta hapxa, which can be fatal to children. This bug actually is a vector of the Chagas disease and its repeated bites may cause a sensitization to them. But in this case it is impossible to tell which is the situation without a clinical analysis. Scorpions, which sting with their tails, are considered to be very dangerous. The Black Widow spider, which is very numerous in the locality, is also viewed as very toxic and is said to be sometimes fatal, although a few days' illness is all that its bite usually causes. The tarantula spider also bites but its venom is never fatal. The Sun spiders, Solpugida, are venomous but their venom supposedly kills horses but not people. All of these spiders and their relatives, according to the informants, sting with the rear end of their body in wasp-like fashion. No medicant is applied on the bite, nature being allowed to take its own course in the recovery.

Concerning other animals, the sting rays are much feared because of the venom in their thorns and their ability to inflict a nasty wound. The bats, according to some informants, can cause disintegration of the body by spitting on it and they also have venom in their tongues, although this belief was not shared by one of the more sophisticated informants.

Only a few animals are considered to be dangerous to eat owing to their toxicity. The toad is one and a little fish, Rhoecredius atrilatus, is another. [762] Of this fish it is said that "one hundred years ago, a man ate one; he died", hence the avoidance. However, rattlesnakes are eaten with relish; only the head and the part of the body where venom is believed to be located being discarded.

771 The above discussion suggested some of the differences in the attitudes 825 toward animals between the Mexicans and the Seris. While the former fear many,

252 of nutritious material which was ground to powder on their stone ahsts, winnowed in shallow baskets and made into a meal or paste.

764 824 The abundant cacti of many species served several other functions in the domestic economy of the Seris. The thorny cholla whose insipid fruits were not fit to eat and whose spines were a constant threat to the unprotected bodies of the Seris, found one use, nevertheless, in the burial procedure. After a body was partly covered with earth in the three foot deep grave, it was densely overlaid with chollas before leveling, to discourage the coyotes from digging for the body.

396 824 The dry skeletons of the giant cacti provided the long, cylindrical poles used in knocking off ripe pitahayas as well as in all other instances in which a straight, slender pole was needed. Since the advent of the open boat in modern times, the cactus skeleton has come in for a new use, for after trituration between stone ahst and hupf, it was found to yield a satisfactory caulking compound when mixed with sea-lion oil.

312 824 The barrel cacti, *Ferocactus Wislizenii* and *F. Coulteri*, though ordinarily abundant on the Sonoran desert are rare in Seriland and practically absent from Isla Tiburon where they may easily have been exterminated by the improvident Seris during their centuries of occupancy on account of their recognized value as water providers on the wastelands over which the Seris so frequently ventured.

342 [132] 824 These Indians found housing no problem, for, living under a climate in which frost is rare and rain infrequent, they found little need for shelters except for protection against the blazing desert sun. Camps that were occupied for more than a day or two, however, usually saw the appearance of a group of crude sun shelters. These were usually made of long, flexible ocotillo branches, *Fouquieria splendens*, stuck in the sand and fashioned into an arched framework over which a more or less complete covering of brush was piled. If, by the sea, a windbreak were desired, the brush top and siding were usually augmented by the addition of several empty turtle shells.

262 824 On the delta plain of the Rio Sonora, the mesquite, *Prosopis juliflora*, grows in remarkable luxuriance, these gnarled, spiny trees forming an almost continuous open forest 20-40 feet high. Its fruit, consisting of small, hard beans borne in slender, woody pods forms a concentrated, starchy food that the Seris found highly nutritious if not appetizing. In late summer when all fresh vegetable food had withered and disappeared, provided the turtle fisheries had not yet attracted them back to their island, they often spent [252] some weeks gathering the beans and grinding them into a meal which was eaten as a watery atole or as a paste mixed with sea-lion oil. The more straggly and thorny cat's claw mesquite, *Acacia Greggii*, and the ironwood, *Olneya tesota*, also yielded woody beans in limited quantity.

[518] In the deeper gorges of the mountains the Seris found *Guaiacum Coulteri* yielding a berry of medicinal properties and also *Jacquinia pungens* which [534] produced a nut, edible when not quite ripe, and forming a favorite rattlebead when dry.

Along sandy washes, particularly on the lower flood plain of the llano grows a low, shrubby weed, *Hymenoclea monogyra*. Although during times of drought it shrinks to stunted tussocks, after periods of heavy rain its flourishing fens produce abundant seeds eaten both by the beasts of the plain and formerly by the Seris.

385 [771] Before the advent of the tin can and the cardboard carton, basketry was an important handicraft among these Indians.

[TEXT CONTINUES ON P. 138--ANALYST]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

an important handicraft among these Indians. They made a shallow, coil type basket such as is characteristic of many southwestern tribes. The Seri basket, however, was remarkable for its extreme lightness in proportion to capacity, a quality due to the spongy character of the coil made of a whisp of splints of the torote. Several torotes are found in the region, the commonest species being *Jatropha cardiophylla*. Also used were the torote amarillo, *Jatropha spatulata*, torote blanco, *Bursera microphylla*, and torote prieto, *Bursera laxiflora*. The woof consisted of splints of palo blanco, *Acacia Willardiana*, or of baraprieta, *Caesalpinia gracilis*, deftly interlaced by means of a bone awl to form a smooth, practically waterproof utensil.

In pre-Columbian times the Seris commonly sought wild game, mostly deer, without the aid of weapons, using only their tremendous physical endurance against their prey, chasing the animal until it was exhausted and could be thrown to the ground. With the introduction of iron, however, the development of the bow and arrow achieved prominence, for the shaping and fastening of points had long retarded the exploitation of these implements. Few straight stemmed or straight grained plants grow in Seriland suitable for making arrow shafts, but on the flanks of the deeper gorges of Sierra Seri and Sierra Kunkaak on Tiburon Island, the Indians found one leafy shrub that filled the need, *Sapium biloculare*. The juice of this plant is also said to have been used for arrow poison. The bow was preferably of palo blanco, wrapped and strung with mesquite fiber cord.

The modern Seri tribe consists of barely more than 100 souls, with early extinction threatening from imported diseases. Their natural habits are now vastly modified and they live a comparatively sedentary life near the village of Kino, scavengering for fish heads and other refuse discarded by the fishermen, now and then fishing for themselves when in need. Every year, however, they trek off to the cactus forest for the annual feast, and in late summer many may be seen camping among the mesquite groves near the Kino well where an abundance of both mesquite beans and water makes for easy living.

[89 cont.]

000 abundant flying and, especially, marine fauna.

For a modern technology, their region has great resources,
511 but for the culture of the Seri it is frankly inhospitable. The standard of living is exceedingly low, as is proclaimed by natives and foreigners and as is demonstrated by the illnesses and hunger that weaken the population.

[90] The Seri truly form part of our Western society, in
226 so far as they catch fish, with fishhooks and motorboats, to sell
439 in the markets of Hermosillo, Nogales, and Tucson, and they
● [177] obtain payments in national specie and coin. The part that
182 they form, however, has its own internal structure, which regulates the relations with the environment and among its mem-
[161] bers, even though a group of 218 persons, which suffers severe alterations in percentages from disasters like the sinking of a boat or strokes of good luck like the establishment of a prosperous fishing camp, is almost insignificant for the nation.

Most probably they have never been much more numerous, and they must not have had great cohesion in the past, a situation explicable in view of their nomadic gathering economy.
621 Toward the close of the 18th century they were divided into bands, of which it is known that the most important were the Guaymas, Upanguaymas, Tepocas, Tiburones, and Salineros.
[648] They banded together at various times in order to defend themselves and to attack the nuclei of Mexicans of the zone, achieving combined action, but without effective political unity.

At present they seem to form a single group without marked
619 subdivisions, although they recognize affiliations like that of "Tiburones," "half-Papago," etc., which appear to have little real classificatory significance.

There is great uniformity: they speak a single language
184 incomprehensible to the rest of humanity; they have a relatively
619 uniform culture, and there is tribal unification for matters involving sexual exchange.

The most obvious relations are spatial; they have important
361 settlements that sprung up around the fishing establishments and are more or less permanently occupied. Of these, "El Desemboque," close to the mouth of a river from which they have been displaced, is the most important, with 80 per cent of the Seri

In general, the Seris have a healthy appearance; the most frequent complaints are gastro-intestinal and visual defects due to avitaminosis. It is very possible that given the difficult living conditions resulting from the desert environment, a rigorous selective process among the newborn takes place so that only those who possess exceptional physical qualities survive. This explains why the majority of them retain the physical characteristics described by Hardy more than a century ago: "the Indians of Isla Tiburón are tall, healthy and well built". 164 147 142

In spite of attempts at education, the Seris do not practice the elemental rules of hygiene; their way of life, neglecting this aspect, contributes to increase the unhealthy foci which exist in the places where they have established themselves. 515 751

Dwellings.—The Seris retain many vestiges of their nomadic life, among them the hut which serves as their living quarters; many of them are simple provisional arrangements for sheltering themselves from wind and sun, and they bear no relationship to the stability and durability of our dwellings. The Seri hut was made to meet the necessities of a nomadic people who had no reason to spend much time nor work on making a dwelling which would only be used for a season (one, two or at the most three months). Nevertheless, some innovations have been introduced in the last 20 years, so that we must distinguish between two types of houses. The primitive model consists of a series of scrub pine arches interwoven with branches from the same shrub almost totally covered by foliage, tortoise shells, *zacate*, etc., with only a small hole in one of its ends as an entrance (this type of hut is the same that McGee saw in 1894 when the Seris still led a nomadic life). 342 [221] [177]

In the new model more resistent woods are used, like *sahueso*, *torote*, etc., and poles, between which is laid a layer mud. The house is rectangular, without windows; with only one entrance, but always larger than the entrance to the brush hut. Other models would have to be added to these two, due to the incorporation and utilization of tents made in the United States which some U. S. tourists or the Society of Friends have given them. The tent is used as permanent living quarters; or sometimes combined with branches to cover the primitive type huts. 342 178 [177]

Domestic Animals.—The Seris are very fond of domestic animals like the dog, cat, and finally, the chicken. For all practical purposes these animals live together with the family; they rest on the piles of rags and sand which serve the Indians as beds; lick the plates and cooking utensils; dirty the house; increase the household fauna with their fleas and other vermin thus contributing to create and unhealthy atmosphere in the home. 231 [136]

Problems of Intoxication.—Their dealings with the fish buyers, in whose stores are sold beer, mezcal and tequila, has turned them to the consumption of these drinks. The Seri drinks liquor in an uncontrolled 273 [275]

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

Elsewhere (Ascher 1961) I have disputed this portrayal of the potential of existing ethnography, citing examples where qualitative and quantitative models have been constructed from ethnography and suggesting that one task for archeology is to codify the literature in a manner useful to itself. Regardless of doubts about existing ethnographies for archeological purposes, the worth of future ethnography for archeology will depend on the acquisition of the relevant kinds of information. Although discussion on the subject has been recorded (Tax *et al.* 1953: 229-232), no specific guides have been produced. This paper provides and discusses an example, which can be used as a paradigm, model, or guide of the kind of information to be collected from ongoing communities which would be of general value for archeology. The subject culture is that of the Seri Indians of Sonora, Mexico; the example describes a persistent trait complex associated with fishing for the Pacific green turtle, with particular emphasis on one trait in the complex, the harpoon foreshaft.

Example from the Seri Indians

The Seri, who numbered approximately 200 individuals in 1960, occupy a band of coastal desert about four miles wide and seventy miles long in the state of Sonora in western Mexico. The band extends along the Gulf of California from Kino Bay in the south to Desemboque in the north, opposite the largest island in the Gulf, Tiburon. Although the region is desert, with an estimated average rainfall of less than eight inches per year, falling mostly in July and August, it is comparatively rich in succulents and small land mammals. The Gulf forms a natural trap for large fish and marine mammals and is a breeding ground for the Pacific green turtle. The scantiness of fresh water has constituted, in the past and present alike, the single crucial limiting factor to agriculture and human occupancy.

In the past the Seri may have comprised from four to six tribal groups, and they were certainly numerically larger, with a maximum estimated population of 2,000 (Kroeber 1931: 53, 30). Until very recently they also occupied Tiburon Island, and at some more remote period they extended south, north, and east over a territory whose bounds are uncertain (Kroeber 1931: 5). On the basis of linguistic change, Kroeber (1931: 54) calculated that the Seri could have inhabited this general region for 1,000 years. It is uncertain whether the original occupation stemmed from Baja California via the Gulf of California or from the north and west via an overland route or routes (Kroeber 1931: 39-51). The first contact with Europeans occurred as early as 1540 (McGee 1898: 51).

In culture content the Seri are most closely affiliated with the Pima (Kroeber 1931: 51), but they do not share the practice of agriculture with them or with their western neighbors. The Seri are primarily fishermen; secondarily they gather the fruits of succulents; and to a still lesser extent they hunt game. McGee (1898: 214)

225 In fishing for turtle, one man stands at the bow of the boat, holding the mainshaft and extension cord in one hand. When he sights a turtle, he propels the mainshaft at the animal's carapace, retaining a firm grip on the mainshaft and the extension cord. If it is struck, the turtle lurches away, loosening the foreshaft and unplugging it from the mainshaft. Tired eventually by the tension [411] applied by the fisherman on the extension cord, the turtle is finally stunned by a wooden club and lifted into the boat.

225 There is evidence that the turtle-fishing complex has consider-175 able time depth and stability. The Seri were using similar apparatus and methods at least as early as 1825 (Hardy 1829: 296-297). At [501] this time they employed balsa boats rather than wooden boats with outboard motors and torches of cactus fibers instead of kerosene lamps. The complex continued, apparently with little change, through 1896 (McGee 1898: 187-193). Wooden boats and kerosene [177] lamps began to be adopted during the 1920s, and outboard motors were introduced in the 1940s.

411 During the entire period of 135 years (1825-1960), however, the harpoon tackle underwent only one important innovation. The 225 gasket on the foreshaft was introduced by a Seri Indian about the 176 year 1935. The addition of the gasket was related to, and coincided [439] in time with, the first attempts of the Seri to supply turtles to the commercial market. When they caught turtles solely for their own use, they did not need to keep the animals alive for very long, but when they began to sell them it became important to preserve them alive until they reached the market. The gasket acts like the hilt on a sword, preventing the entrance of the foreshaft hafting into the turtle's body. Through its contact with the carapace, it restricts the rotation of the point within the animal's body and provides a seal which inhibits the loss of blood, and thus prevents early death. After the turtle is stunned with a club and lifted into the boat, the foreshaft is removed and the hole which it made is stuffed with a piece of cloth.

124 Seri men were shown a harpoon foreshaft from a museum archive and asked what it was for and whether they themselves made similar 411 ones. If an informant acknowledged that he made them, he was asked, at the minimum, to detail the materials he used, the procedures he followed, and the approximate amount of time it would take him to produce one. Later he was requested to show the field worker examples of the foreshafts he had made. Of the approximately 40 adult Seri males, about 25 were available for questioning. Of these, approximately ten did not make foreshafts or had made them in the past but did so no longer; they were mainly older men and those [474] engaged in the administration of the Sociedad Cooperative de Pro-[887] duccion Pesquera Seri. Five men either would not or could not volunteer information. Data were obtained from the remaining ten adult men and from one eight-year-old boy; they include 21 foreshafts made by these eleven people.

411 The materials from which a foreshaft can be shaped and as-325 sembled vary within what is available in the Seri environment. Iron

262 178 I have no idea, of course, what the diet may have been in the past since only archaeology can suggest the answer. But I am sure that there has been much change in their diet since Kroeber saw them, not in the basic pattern but in the composition. With the introduction of hook and line [177] fishing, the percentages swung in favor of fish, [226] while decimation of the marine turtle cut down the importance of this animal. Simultaneously, 262 the Seris now have available manufactured or [177] imported Mexican food items: flour, sugar, rice, [439] potato (when no one is looking; potatoes are not supposed to be sold to them because they make *tepache* from them which makes them grossly fish in cans, coffee and tea. Dependence on the products of the desert has dwindled. Rattlesnakes, desert turtles and chuckawalla still find their way to the Seri kitchen but not too frequently. Pelican and sea gull will be eaten only when rough times beset them but are disdainfully refused at other times. My own estimates, impressions not supported by any attempt to measure their diet, are as follows:

fish	50+%
turtle	8
Mexican import	20
desert plant	7
desert land animals incl. stock	5
shellfish	10
total marine origin	68+
total desert origin	12
imported origin	20

224 178 [685] Another important change in the pattern is the unquestionable decrease of hunting (other than marine animals) in Seri life, as of the domestic stock stealing, the place of which has been taken in a way by the dependence on manufactured foods and items. Hunting nowadays is done rarely and only few individuals will devote some months out of the year to it. Stealing of domestic stock [685] has ceased for practical purposes, since in the past it lead to virtual extermination of these Indians. Occasionally the Seri kill off a semi-wild burro, herds of which run about loose in the desert or they'll get leavings off one, hunted down by a Mexican trader or fishermen.

411 224 [857] The Seris' basic tools of game procurement have changed. Bow and arrow were still much in evidence and in use in McGee's time but seem to have gone out soon after. Kroeber did not mention them and by now they are quite extinct, except as clumsy toys little boys use to play with. The throwing stick is still used on rabbits—any stick one can scrounge on a moment's notice will do for the purpose. If any traps or falls had been used we do not know of them. Accidental stones may be used much in the same way as throwing sticks. In general, various sorts of fire arms, mostly .22 and .38 [177] caliber are owned by a good many Seri men and have replaced other weapons in the terrestrial hunt.

226 411 177 More important are changes in the fishing procedures. Formerly spear and detachable harpoon were their only marine weapons. Even as late as 1930, during Kroeber's visit, the Seris made no use of hook and line. But now, hook and line of

[p. 7A]

[apparently a line of type has been omitted here-Analyst]

226 411 177 commercial origin are their main instruments of fishing. To this they added dynamite, sometimes with disastrous results to themselves, mostly as a way of securing bait. Single-pointed fish-spears which loomed so importantly in McGee's account have gone the way of the Dodo for its original purpose and transformed into iron bar lances, now used largely as weapons against rattlesnakes that men encounter in their desert roamings. However, in the forties, when the Seris spent a great deal of time getting sharks and huge rays, they killed them with these weapons.

226 411 What retain some importance are the harpoon and the two-pronged spear called "puiero." The two-pronged spear is one of their oldest weapons. The construction is much the same as when McGee visited them. The spear is used mainly to stab large-size fish, the giant *bais* or *mero* for example, after it has been brought up on the line. The [225] harpoon is now exclusively a weapon for the turtle hunt.

226 177 [157] An interesting fate met an effort to teach these Indians net fishing in 1947. They tried, ruined the nets and never took it up since. The instigators were Mexicans, the fish traders. I suspect that Seri individualism had a great deal to do with their lack of interest in net fishing which after all demands a certain amount of cooperation. With the hook and line fishing, men can have much more their own way.

501 177 648 An added "tool" of the Seris is the plank boat. The balsa which McGee still observed during his visit, had already vanished by the time Kroeber came to the Seriland and had been replaced by these boats. The boats are flat bottomed but good sized. The material was provided by the Mexican government. Boats are usually propelled by 5 hp. motors leased from the Mexicans (no Seri is rich enough to purchase [439] one) who also sell them gasoline and oil at exorbitant prices and in return buy Seris' catch of fish and sea turtle for low prices. At the time of my visits these amounted roughly to less than a peso [435] per kilo of the flayed, degutted and cleaned fish (less than 8 cents) with fluctuation up and down the scale depending on the kind of the fish, and to about 30-50 pesos for medium to large size "cahuama," the live marine turtle.

501 648 The Seri boats are also propelled by paddles and sail—this is always the case with the families who wish to stay away on Tiburon for some time. The Mexicans will not lease them their motors for such trips even if the Seri, some of them at least, have enough knowledge of the motors to repair minor stoppages—a demonstration of the fallacy [114] of McGee's idea that they are genetically unable to handle tools. In this respect, Kroeber's (1930: 25) estimate of them is closer to the truth.

462 Sexual division of labor in procuring food goes on, much the same as it had 70 and 30 years ago, with the sole exception of the imported goods. [439] Here purchases are made either by men or women or by children, depending on who at the time has the cash and what one wishes to buy.

Fishing is still done by men and so is hunting. Women still concentrate on gathering, whether of

[P.7B]

9:Malkin F-5 (1953-1955)1962 NU31 Seri NU31

III

MAMMALS

262 water for a week until it escaped. There was
[231] no intent to do away with it and serve it up for dinner later on.

The 3 species reported as eaten in the past are kangaroo rat, sea lion and the ringtail cat or
[252] cácomistle. Of these the little rodent had been supposedly "boiled in hot water with salt" which
[261] method of preparation may indicate that it happens quite recently yet. It is quite possible that in times of famine this animal is still used. The sea
[432] lion has been reported as "eaten once a long time ago. All of it. But not now. Its hide was once sold
[114] also but now it isn't used at all." This conflicts with McGee's statement (McGee, 189:202) that there was a taboo on eating sea lions among the Seris and there is no way to reconcile the information.

[114] McGee's report may be as truthful as are the uncertain and hazy comments of the present day Indians.

224 On the other hand, the cougar belongs to a very dubious category, unless we can rely on Miguel Barnett's memory. All 4 of the younger informants emphatically deny that the cougar has ever been hunted for meat. But Miguel Barnett claimed that this has been done in the past, although he could not tell how long ago. Kroeber says nothing about this animal and this makes it difficult to date the events. At the time of Kroeber's visit, Miguel was at least 25 years old and the cougar could have been hunted either
[262] then or earlier. But today the Seris do not eat the flesh of the big cat and their abhorrence of it has been confirmed by the Mexicans to whom I talked about the subject, and who relish cougars' meat. This apparent distaste for the *el tigre's* flesh may
[178] well be a recent development quite unconnected with the lack of weapons. McGee (1894: *loc. cit.*) casually mentions that the Seris hunt both cougars and the jaguars but cites no evidence for it. Yet
[411] in his time Seris' almost only weapons were the
[177] bow and arrow and a lance which today has been replaced by firearms. I am unable to explain this contradictory behaviour.

262 Finally, there is the Ringtail cat or cácomistle. Although this beast has been reported as part of the diet, the information isn't too reliable. I had
[124] no way of checking whether this was the animal the Indians had in mind. Their description of it seemed to answer some other unspecified animal and their answers were confused. The fact is that the Ringtail cat does occur in the Seri territory and they are surely familiar with it.

Of the remaining 11 species none were ever mentioned by any of the informants as having been ever eaten. Their denial of eating the coyotes were most vehement. Coyote figures out probably

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Age

*825 Some information concerning the hypothetical length of life of the mammals has been obtained for the majority of the species. The results show conclusively that the Seris have little knowledge of the subject and indeed no way to estimate what it is. In more than half of the species they simply didn't know what the answer was. In several others, their uncertainty was only too clear from the hesitant answers. I had an impression that here we deal mostly with guesswork, not based on any observation or even perhaps any forethought. Such replies as were given also varied greatly from species to species and also within the species depending on the particular informant. The mule deer may live then a year and a half or ten or fifteen years depending on the answers to the question; the peccary is said to live a year only, but the jaguar twelve and the whale and the dolphin, according to those at least who ventured to say something on the subject—25 years.

These answers at once show two things. First, there is little knowledge of the subject and second, there is a certain gradation of longevity proportional to the size of the animal. On the other hand, these answers are in no way correlated with the ecology and they can't be. The mammals are present throughout the year without regard to the seasonal changes, and with the exception of the bat, the whale and perhaps also the killer whale, they are not migratory.

Size and Weight

A contrast to the nebulousness of the Seri knowledge of the age of mammals is their responses to the questions of weight and size. They showed none of the hesitancy and indecisiveness. Some of the detailed differences concerning sexes (on this subject) have already been mentioned. As a matter of fact, the Seri gave readily exact figures for all but two species of mammals, the exceptions being the jaguar and the bat. Jaguars are so rarely seen by them that some of the informants had an exaggerated notion about the *el tigre* giving quite extra-ordinary figures for its size—quite certainly from hearsay. Of the remaining 19 species all but two were described in the figures both for the weight and for the size which are very close to the actual size or weight of the animal. The two exceptions are killer whale and grey whale. Here the informants guessed and in the case of the California grey whale gave the following figures: 35 meters long, four meters high and weight four tons. The size, of course, is very much more than the actual size, the weight quite a bit less—both obviously subject to guessing. But it is interesting that the dolphin has been correctly described in both respects, which only indicates the opportunity to take close look and lift the animal.

Seris' ability to estimate correctly the weight of an animal is not surprising but it must be a fairly recent development, ever since scales for weighing fish were introduced. The Seris do

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*825 are rocks but never on sand, and this, of course, explains its absence or presence in various localities as the Indians were prompt to point out. The kangaroo rat is said to live in the desert, sand or rock, but is never found on the sea beach —the later statement is particularly true. Coyote is supposed to be especially fond of the marine beaches where the Seris asserted "it eats dead marine animals and live crabs, or even catches fish if he can." Finally, the favorite resting place of the bats are said to be "caves" (cave shelter) and cracks in rocks but "not human houses." In fact, the informants denied that the bats ever lived in the human habitations. While this is surely true of their own houses it is not so when it comes to the Mexican habitations. I had numerous bats living under the roof of my own household. The probable explanation for this will be taken up later on.

In any event, there are only a few cases showing ecological preferences of the mammals and except for the obvious distinctions between the terrestrial and the marine animals—they do not form any particular pattern, at least from the available data.

Toxic Animals

The only mammal which some of the Seri consider toxic is the bat. But even here the ideas of the informants are conflicting.

The differences seem largely between the older and the younger informants. Miguel Barnett believes that the bat is venomous, that the venom is located in the tongue and that it can be also dangerous by spitting the venom out, which saliva having landed on the flesh may cause disintegration of it. He also thinks that there is no cure for this bat affliction. Not so with the younger informants who thought that bats could bite all right with their teeth when captured but otherwise were perfectly harmless. It may be also added that the only other mammal considered on certain occasions as toxic by the Seri is the coyote—when rabid. Here again they have no cure but they do know that a cure for the rabies can be obtained in the Hermosillo hospital.

● [177]

The belief concerning supposed toxicity of the bat seems to be associated with the older Seri concepts, so to speak. The younger men, those who know how to read and write Spanish and who had been around, are apt to disregard the idea. But even so, the belief in the toxicity of the bat is one of the few such notions held about the animals without any supporting evidence from nature.

Miscellaneous Attitudes Toward Mammals

The Seri have, in general, very little fear of mammals. Such as they do have concerns mostly large animals which can become dangerous under certain circumstances. Both the cougar and jaguar are considered dangerous to men and quite capable of killing them. But they are not apt to attack unless in defense of the young. Also the coyote, the badger, sea lion, as well as the bat, are considered dangerous owing to the bite they can inflict. The badger is especially combative,

[P. 158]

*825 the Seri think, but the captive badger held for a week certainly did not fit this description. Finally, the peccary is held in great respect by the Seris owing to its combativness, nastiness and aggressiveness while in the pack. For this reason peccary hunting is done only by the adults, the Seris said. [224]

Other than this and with the exception of the bat, the Seri do not particularly fear mammals. Their attitudes may be best described as being very much matter of fact and pragmatic.

The situation is slightly different with the bat. The older ones surround it with a great deal of folklore, possibly related to or originated from [77]

[P. 16A]

825 [77] the Mexican, since it includes such well known European beliefs as making deliberate efforts to get itself trapped in the hair and biting with the tongue. The younger ones discarded these ideas. But the residue of them or, at any rate, an afterfeeling remains. The bats are somehow regarded with disgust. It is this attitude which may well account for their denials that it lives in the human homes and it may represent a conscious or unconscious effort to cover up a disreputable fact (to them). [124] There had been some other occasions where the informants denied, for example, eating certain animals or else the knowledge of certain matters which were both later exposed by the sequence of events.

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262 pelicans are not; they are regarded as "bad food," unfit for eating. No further explanation has been offered here and it might be that the same sort of prejudice works here as in the case of the adult birds. Otherwise, reasons for rejecting eggs for food are probably a matter of mere customary attitude without any particular rationalization. In a few instances, the dove being one example, the eggs were said to have been rejected because they were "too small to bother."

237 291 Other economic uses made of the birds are extremely few. At one time, the pelican skins were used for clothing and, in fact, in McGee's time they represented, perhaps, the most important item of clothing for the Seris, having been worn in shape of wrap-around robes, usually covering the lower part of the body. Moreno reported these robes as still is use "30 years ago or more," in the early twenties, but in Kroeber's time these robes were already discarded in favor of the European garment. The Seri, nevertheless, still preserve skins of these birds—the white pelican, larger of the two, always had been favored here—and occasionally sell them to the visitors. Another use made of the feather is in the arrows. The cormorants, heron and the owls had been especially mentioned in this connection. But it is certain that they were not the only birds so exploited and also that this particular use went out of business along with the disappearance of the bow and arrow as the principal weapons. The use of feather for arrows may well continue into the present in a somewhat degraded form. The Seri boys play a great deal with bows and arrows, shooting them at any moving available target. They'll pick up any available feathers.

[177] [439] 237 411 [857]

Pets

231 Somewhat desultory use is made of birds as pets. During my visit I have seen doves and an egret kept in houses as pets by the adults and fed quite frequently. The number and variety of birds which may become pets in households may well be larger. Pelicans and sea-gulls are less fortunate. They are often shot at and over-powered by the boys. But instead of taking them to the households, the boys stage games, shooting them at point blank from bows and arrows and pea- shooters. These somewhat bloody executions take place almost every day. The pattern is the same. Only the subject of the game changes, depending on the available species of bird or animal.

* 825 857

Hunting

223 It is hard to speak of hunting in connection with birds, because there is so little effort made to go out and get them. The main exception is the duck and this, as I already mentioned, is hunted on Isla Patos and clobbered at night with sticks and stones in great numbers. This is one of the few instances in which the Seris will go out of their way to get a bird. Sea-gulls and cormorants and, more rarely, pelicans are dispatched by pea-shooter (stone), sticks, small clubs and, on occasion, with a shot from a .22 caliber rifle.

[411]

[P. 18A]

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V

REPTILES AND AMPHIBIANS

136 fore it was impossible to check the Seris' ability
* [825] to distinguish between these.

As for the marine turtles, there are several possible species in the area. There is no mistake about the loggerhead. I have seen one carapace and bones taken at Campo Vivora, while with the Seris. The others could be any two of the several species common in the Gulf.

Economic Uses

* 825 In 1956 I published data concerning economic
114 exploitation of the reptiles by the Seris which need correction. Eleven species out of 25 had been reported as used economically. Additional work done in 1955 and after the completion of the MS. indicated a much higher percentage: 17 species out of 26 are used. Thus the percentage increases from 44% to 65%. The percentage of the species actually used will probably rise with additional
[262] field work because some of the informants are dis-
[124] inclined to admit eating certain animals or will simply say, "these had been eaten in the past but not now." However, close inspection and observation often contradict these statements.

262 The list of species reported as eaten is as follows:

Turtles and tortoises: all species
Snakes: both racers, patch nosed snake and both rattlesnakes
Lizards: both chuckawallas, Gila monster, race runner, northern crested lizard

This listing shows how much dependent are the Seris on the desert habitat for food. Even today, with all the available ready-made manufactured
[178] food or imported food from the *tienda*, they gather evidently most of the common reptiles to increase their menu.

Of the species in the list, only two, both smaller species of sea turtles, figure as really important items. McGee believed that here was by far the most important part of the Seri menu, with the marine birds running second.* Now, the importance of the sea turtles has declined, no doubt through a variety of outside influences. I doubt (on the basis of my observation) if altogether it comes to more than 10% of their total diet. The turtles had been replaced as number one food by
● [177] the fish (with the introduction of hook and line fishing). But another factor evidently is the depletion of the turtle population. The third species, the huge loggerhead, is so rare that during the entire
[225] summer of 1953, only one of them had been harpooned and that at Camp Vivora away from Desemboque. The two smaller species have also become very rare and hardly ever show up near the village. They can be taken on more distant expedi-

*Eggs of the turtles are considered a delicacy, especially of the smaller of the two. The Seris say that the loggerhead has been eaten once but now almost never, because it became so rare.

[P.22B]

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*825 In the northern chuckawalla, the female is supposed to have lesser ridges than does the male but this is an exception. In all other cases, the sole possessor of this characteristic is the male. This, of course, is not so in nature, but it shows that certain structures are supposed to indicate male sex. It is also clear that this particular trait is associated with the lizards and in a way represents a kind of taxonomic character the Seri tend to associate with the male lizards.

The only other trait employed exclusively refers to the toad. Here the male is supposed to have "dos huevos," two eggs, outside, the same feature the Seris associate with the male of the mammals.

It is interesting that no structural differences were suggested for the side-winder.

Age

The age of reptiles and amphibians is really a great mystery to the Seri. Although they have given some sort of answer for 19 species in the list and for 16 they suggested definite length of life for the animal (for the other three they didn't know), no reliable replies suggesting anything else than the individual idiosyncracies of the informants could be established. The informants showed a distinct tendency to provide pat answers for all sorts of creatures. This tendency appears to be associated with the age. The younger informants usually gave brief prospective age of various species; the older ones gave longer age. Thus, Moreno, for example, usually gave hypothetical age of larger species as say 5-6 years while Chico Romero or Ramon Montanyo for the same species gave 70 or 80 years respectively. It is interesting that the two last men are close to the age indicated for the animals.

The only general tendency that could be established is a gradient of relationship between the size and longevity of the animal. The larger the beast, the longer it lives.

Seasonality to some extent enters here. Thus two of the informants said of the side-winder that "perhaps it dies with the cold season" although others thought it lived a long time. Similar suggestions had been made for a couple of species of lizards. It is clear that absence of such small creatures during the cold season must suggest to the Seri their early demise.

In one case, a definite manner of establishing age of an animal has been suggested. In the western diamondback and the side-winder, the age, the Seris think, can be established by counting the rattles on the tail. This belief is widespread among the Mexicans and it may well be that it represents an increment from the influence of the Spanish-Mexican culture. [177]

Size and Weight

Seris' ideas of the size of reptiles is remarkably accurate. Time after time they made very correct estimates of the size which the animal can reach. They expressed this as a rule with a hand motion indicating the size of the animal. The accuracy is not surprising, because they see these animals [804]

[P. 25A]

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VI

FISHES

Taxonomy

* 825 The Seri have considerable skill in differentiating between different species of fishes. There are two main groups which they recognize but which in their own mind are entirely unrelated, the fishes and the sharks. It is also certain that they consider the mantas and sting rays as creatures allied to the sharks and not to the fishes. To the Seri sharks and mantas are not fishes at all but entities of their own. It appears that there are two bases for this distinction. Fishes, as Seri see it, always lay eggs; sharks and mantas do not but instead deliver young alive (in fact some do and some don't). Secondly, the peculiar dimorphic structure in the sharks and mantas, the claspers present in the males of both, not only suggest to the Seri the male sex but also an association with another group.

On the whole, the Seris were able to distinguish as separate species almost all of the fishes for which they were questioned. There is confusion in a few instances. Although *Totuava* and the *Pinta* they think are separate, the evidence suggests that here they actually distinguish merely individuals of different age that belong to the same species *Epinephalus analogus* and that the mature individuals are called *Totuava* and the immature *Pinta*.

An interesting situation arises with the *Myrichtys tigrinus*. This peculiar and remarkably snake-like fish is considered not a fish at all but a snake. The Seri know nothing more about it, and this is where the association ends in their mind. For taxonomic purposes, this fish is included among the fishes but it should be remembered that this is not what the Seris think.

With the exception of three more species of fishes, *Ogilbia*, *Lutjanus argentiventris* and *Conodon serifer*, the Seris had at least some knowledge of the natural history of each species. But in these four cases they could say nothing, nor have they recognized the last three.

Economic Uses

226 ● 177 According to McGee, the sea turtles and the marine molluscs are most important in the Seri economy, with the fish coming in the third place perhaps. Today the situation has changed radically. The fish became the very basis of the Seri subsistence, with the marine molluscs falling into third or fourth place in order of importance. One good reason for the change has been the revolution wrought in their fishing method with the introduction of the hook and line. This must have come into the fore after 1930 and became the dominant method of fishing after 1940. The Seris did learn to use hook and line from the Mexicans

[P. 31 B]

226 and, from all accounts, also from the Japanese
●177 whose trawlers worked in the Gulf in the late
1930's. Today, hook and line fishing from plank
[411] boats almost completely replaces earlier methods,
[225] the spear (pueiro) and the harpoon (barilla).
Harpooning is still done in hunting marine turtles
while spears are occasionally used on larger
groupers and also on sharks and mantas. Harpoons were also used in connection with the latter. But since World War II the shark fishing has declined, owing to the development of synthetic vitamins and abandonment of sharks and mantas' liver oil as a source of vitamins. In these operations, the Seris were for a while involved to a considerable extent. But now they have completely switched to commercial fishing which supplies not only food but also ready-made cash from
[439] the Mexican traders, and with it the Seris can purchase luxuries of life in the Mexican *tienda*.

262 Altogether, out of 42 species listed here, the Seris reported taking for food 20 species which are as follows:

Malacosteuus zonifer
Firella simplicidens
Anisostremus davidsoni
Paralabrax maculofasciatus
Lythrulon flaviguttatus
Mugil sp.
Cynoscion parvipinnis
Anchovia macrolepidota
Bairdiella icistius
Stereolepis gigas
Mycteroperca jordani
Cynoscior macdonaldi
Epinephalus analogus
???? (Pescara)
Trachinotus paitensis
Verruculus polylepsis
Gymnothorax castaneus
Hypsoblennis gentilis ricketti
Abudefduf saxatilis

The most important of these are the groupers, the *baya, pinto, totuava* and *mero*—the latter a giant fish often in excess of 150 kg. and nearly three meters long. The most important of these is the *baya*, a medium size fish taken daily in varying amounts. I suspect that this fish accounts for
[226] more than half or maybe even 2 3 of the total Seri catch, weight-wise. Of others, none is of any importance except seasonally.

* 825 Another sort of use is made of the sharks and mantas in connection with the already mentioned exploitation for liver. Five species of sharks and the horned manta were listed by the Seris, with *chata, gato* and *composo* most frequent and perhaps most important.

Trading, as already mentioned, is of considerable importance to the Seris. Some fish are eaten
[439] only occasionally, but they may be traded off to the Mexicans.

262 Not all fish are eaten. In most cases no particular explanation had been offered for the rejection. But, in some, specific reasons were mentioned. The *Scorpaena sonorae* and *Cetengraulis mysticetus* are so rejected because they "are too bony to eat." *Gillichthys seta* are considered unfit to eat because of its tiny size while *Sphoeroides annulatus* is refused because of its supposed toxicity, of which more later. Finally, the sharks are not eat-

* 825 quite possible but I couldn't substantiate the story
237 from contemporary evidence. Perhaps during the
height of the shark hunting for the liver oil, the
[322] Seris used the oil also for wood polish, although
it isn't very clear just what sort of artifact they
make would require such treatment. The wooden
tools or artifacts among them are in short supply
at all times. Finally, the huge horned manta was
supposedly hunted also for its hide but just in
what circumstances it was not explained. It is the
only fish which the Seri ever mentioned as having
been put to such use.

Fishing

226 As already mentioned, fishing nowadays is
largely accompanied from flat-bottomed boats
with hook and line. The old ways of getting fish by
spearing are almost gone for good. Recently, an
[177] attempt has been made to teach the Seris siene
fishing, but 10 years of these endeavors accom-
plished only ruination of a number of expensive
nets and of much fishing gear and the desertion
[157] of the project by the Indians. It may be that their
individualistic and almost anarchistic attitudes
preclude cooperation, essential in this type of
fishing.

The bait is obtained in any one of the three
ways: by dynamiting fish in tide pools or
along the shore, or by catching small fry with
small hook and line, or finally by collecting small
fishlets in the tide pools, prying them out from
[857] under rocks or simply—and here the Seri boys ex-
cel—by shooting them in the tide pools with tiny
toy arrows or simply spearing them with a stick.
[177] The dynamiting is done with the purchased sticks
of dynamite which the Seris obtain in the tiendas.
The procedure is often risky and down right dan-
gerous. Some of the Seris have blown themselves
up with dynamite. I have seen one of them, who
lost both arms and had a jaw broken during a
dynamiting trial. He went about with a dirty rag
tied up over his head to support the wrecked
[164] jaw-bone. He was carried off by measles two years
later in the 1955 epidemic.

226 The Seris' commercial fishing is pretty much
648 controlled and exploited by the two or three Mexi-
439 can fish traders from Nogales and Hermosillo.
These have their tiendas in Desemboque, which
443 at set price sell things to the villagers. They also
provide the Indians with the five horse-power mo-
[501] tors for fishing trips and pleasure cruises and with
the oil and gasoline essential to run these—also
at set price. They finally purchase the fish—at a
set price—and from the proceeds the Seris pur-
chase goods at the tiendas, completing the cycle.
Not all Seris are compelled to work for the Mexi-
cans, and, in fact, they do not always do so. Some
[501] families stay away from Desemboque and depend
on the sail and oars for propulsion. They come to
the village only once every few months to obtain
supplies. Even when in the village, the Seris make
little effort to fish for more than they wish to get
in order to satisfy their immediate needs.

226 Fishing expeditions usually take place in the
morning. Most Seris will set off before daybreak
and will return with the catch by 11 a.m. or noon.

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301 worn. I have observed women wearing necklaces
+825 of the former and women and very young boys of the latter. The olive shell, incidentally, is made into two sorts, the natural, unroasted shells which retain a greenish-purple, mottled color and the white. The white pallid color is achieved by roasting the shells over fire. The necklaces are mostly made up of either colored or white but occasionally they may be made of mixed shells and then they are usually alternately interlaced, now with one, now with another.

+825 b) *Utensils:* Two species had been reported used as occasional drinking or dipping cups and spoons. *Lavicardium elatum* and *Ficus ventricosus*. *Ficus* is presently discarded, but the *Lavicardium* is still occasionally used so. There is no doubt that the incidental use of these shells increases during longer fishing expeditions when the Seris are apt to lose some of their gear.

[412] [415]

[436] c) *Money:* Interestingly, the brown cowry was supposed to have been used as a means of exchange, as money—in the past. If this is so, then the selection of this shell for such purpose is not surprising considering its widespread use throughout the world.

[171]

439 d) *Trade:* Altogether 12 species had been re-
+825 ported as traded off either in the past or present. The trade importance of various species of shells varies with the demand of the market and sometimes may be only sporadic and short-lived. Only a few of the species had been indicated as having been of any trade importance in the past, and it may well be that the Seris did not register the species which may have been briefly sold to and outsiders during the short-lived fads of demand. It may be said in general that the trade importance of the shells increases and that greater variety of them are exploited now than formerly. This is surely owing to the increasing accessibility of the Seri country and the increasing tourism, not only visitors from Hermosillo, but also from such far flung places as Tucson, Phoenix and even Los Angeles.

●[177]

In some instances, the Seris had no idea what the shells were sold for. The augur shell is on and off sold to some American traders who show up in Desemboque once in a while and for whom the Seri women accumulate these shells. But what uses were made of these, the Indians surely didn't know. Neither did they know what uses were made of the *Murex* shell and the *Turbo*, both of which were periodically sold in bulk to Hermosillo. On the other hand, they had some idea what uses were made of some other shells. *Pteria* and *Atrina* contain pearls and these are much desired. Especially the pearls of *Atrina* which are sold to the Mexicans or to the visitors for 25-50 pesos each and therefore have immense value, for the local market. The *Pteria* shells are said to be used for button making, and the Seris themselves claim that they make buttons of this shell. The most important of all, however, at least at the time of my visits in 1953 and 1955, was the olive shell. It was easily the most commonly and most numerously collected shell of all that the Seris ever collected. Owing to the scarcity of it in Desembo-

[435] [237] [226]

[P. 39 B]

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X

INSECTS AND ARACHNOIDS

114 Altogether information has been collected concerning 92 species of insects, scorpions, ticks, myriapods and arachnoids.

Economic uses

262 [114] McGee says that "good many insects" are part of the Seri diet, although he does not specify just which they were nor how significant. There is no doubt that in his days, the insects played some role in the Seris' food and that they were probably far more important in the distant past, in the XVIII and early XIX centuries, before large flocks of livestock, horses and cattle of the Spanish rancheros offered excellent opportunities to supplement the usual diet.

● [177]

Of all this but minor traces remain today. The Seris even have forgotten which insects had been eaten by their ancestors. Apart from the bees, only the Sphingid caterpillar has been indicated as "eaten in the past, but not now." As for the bees, [263] their honey still is part of the Seri diet. But with the availability of sugar, even this addiction dwindles.

† 825 857 Other than this I have been unable to discover any uses whatever, except perhaps as playthings of little boys, with the usual torture in view. The *Cicada* is most significant of these, of which more later.

Pets

231 [171] The only insect pet is a *Cicada*. This insect is usually tied to a long thread, its forewings partly clipped off and then released into the air like a kite. Local Mexicans also provide their own boys with a similar kind of toy.

Hunting

222 Only bees are hunted. They are usually flushed out of the cave shelters in the mountains. The operation is accomplished without the use of smoke. The honey is cut out with a knife.

Taxonomy

* 825 Seris' ideas of association of various insects are very loose. Few insects are recognized to form natural groupings; bees, butterflies, wasps, spiders are most distinct. However, there are all sorts of gradations blending confusedly with each other, often dependent on the knowledge and interest of particular informants.

Simple recognition is not always present. Out of 92 forms, 13 the informants could not identify, simply saying that they didn't know them. *Cicindela lemniscata*, *Melanotus cribricollis*, *Horistonotus*, *Meloid*, *Oxacis*, both species of *Cymatoderu*, *Photopis*, *Scolopsella*, tiny Scarab, *Leptoremus*, *Homolocorus*, and *Reduviid*—all these were in the

[P. 47 B]

* 825 [753] to the belief that the spider stings with the rear of the body) may cause death in 2-3 hours. It may also kill chicks and one of the informants, Jose Juan Moreno, claimed to have been paralized by the sting of the Black Widow for eight days . . . . [158] However, Juan is a good hypochondriac, and even when not apt to exaggerate, he may have suffered a genuine trauma owing to an encounter with this spider. While smaller spiders are not considered too dangerous, the *Tarantula* is. It can both bite with its jaws and sting with the rear end of the body and it is said to be more dangerous to children—it may cause their death at times. [753] The adults will weather its attack but will become quite ill. [752] As remedy for its bite, a plant *quivira* is used as a hot extract taken in a small glass for 2-3 days.

Almost all of the animals closely related to the Arachnoids, the scorpion, the Sun spider, *Scolopendra* and the tick, are also venomous in the Seri view. Of these, the scorpion is most feared, and in adults it will cause illness lasting up to a week while to very small children it may be fatal. As a proof the informants mentioned a six months old girl recently stung by a scorpion who died in less [165] than six hours—the fact confirmed by the Mexicans in the village. Remedy for this is similar to others—a plant called *amx.xuhây* is drank with [762] hot water for three days, a glass per day.

The Sun spider, also armed supposedly with a sting at its rear, is said to be fatal to horses for whom there is no remedy. This is a pure fiction, [177] but the belief is common among the Mexicans and the Seris certainly took it up from them. But no one suggested that the Sun spiders are in any way harmful to men although they are avoided, just in case.

The *Scolopendra* is considered very dangerous, much like a viper. It bites badly but is not fatal. Actually, the story probably concerns another species, for *Scolopendra malkini* has only recently been described and is rare in Desemboque.

The tick's unpleasant traits had already been discussed under another heading. All that is essential to add is a belief that in addition to other exploits it can enter a person's ear causing much [753] pain and that for this reason it is particularly bad for the children, as there is no remedy.

There remain three more species of various degree of toxicity. Of these, the *Triatoma* is most conspicuous both for its effects and factual observation. This blood sucker bites with its mouth parts [753] and introduces illness called by the Seri *syexkis. ?e . kemep* which may end fatally. People of all sexes and ages are subject to it equally, and the illness may last three months, and there is no

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9:Malkin E-5 (1953-1955)1962 NU31 Seri NU31

XI

SUMMARY

* 825 [114] In 1956 (Malkin 1956:74) I published tables indicating the degree of economic exploitation of the animal world by the Seris. These tables were incomplete and also need corrections. Therefore below I am reproducing the revised version.

Class	Species Reported	Species Exploited	Percentage
Mammalia	21	9	40
Birds	24	6	25
Reptiles and Amphibia	25	17	68
Fishes	44	23	52
Molluscs	37	27	70
Crustacea	10	2	20
Insects	92	—	—
Miscellaneous	9	—	—
Totals	262	82	30

These figures show as yet remarkable degree of exploitation of the products of the sea and also of the reptiles with correspondingly lesser interest in the terrestrial animals in general. Of course, mere listing of animals does not tell the whole story. In the first place, it does not indicate the changes that took place nor does it suggest the relative importance of any group or species. Historically, the situation is different now. Out of nine species of mammals reported as eaten only six still figure out in the diet. The reduction is even more striking in birds where only three are admittedly eaten and two of these only furtively. More yet, only 12 species of marine molluscs out of 27 are eaten while the rest get discarded. All this is tied up then with the changes in the economy, with the importation and increase of the trade foods and goods and also with increasing preoccupation with the commercial fishing at the expense of hunting and gathering.

262 Individually, by far the most important in the Seri diet and economy are the fishes with half a dozen large commercially lucrative species leading the list. Next come the marine turtles and following these for the third place tie the molluscs, the mammals (lagomorphs, bighorn and peccary) and probably the rest of the reptiles of which the rattlers are probably most important by volume. Insects do not figure any longer in the Seri economy in any way, although at one time they probably had some significance. On the other hand, while the food importance of the molluscs decreased immensely, their trade importance is on the upswing owing to the demand from the outside. Thus the basic changes in the Seri patterns of exploitation of animals has been a result largely of an outside stimulus.

Fishing and Hunting

226 185 Fishing is practiced mostly to satisfy the immediate needs, of petty cash and food. Once these are satisfied, there is no incentive to fish until the need arises again.

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* 825 it is said to live "in refuse, fish and fish offal and only in the fishing camp." This is one that one must reconcile with the Seris' simultaneous belief that it is parasitic on dogs and that it sucks human blood as well. More difficulty here creates their belief that it is found only in the camp but that the dogs on Tiburon are free from it.

The Phasmids interestingly are associated with trees and sticks, a very correct notion and the Mantids also with the trees.

However, the information is incomplete and apart from the few cases cited above usually contradictory and hazy.

Toxic Insects

Only 19 species out of 92, or little more than 20% of the total, are considered toxic in anyway. Unlike in most of the other phases of the Seri knowledge of the natural history of insects, the natural groupings are quite clear. The three main groups the Seris consider toxic or harmful are the Arachnids, the Arachnoids (*Acarina* included) and the *Hymenoptera*, all very much as one would expect. In addition few beetles and bugs complement the list of the dangerous creatures. tures.

Among the *Hymonoptera* are all of the species listed, with the exception of the bee. This may be due to the fact that the bee in the Seri country is the stingless Melipoind (?). Of the toxic kind, *Pepsis* (the Tarantula hawk) is probably most feared. The sting the Seris think is very painful but disappears after a few minutes as it contains little venom. A plant is applied to the bite and also [752] taken internally with hot water. The *Pepsis* must [857] be really feared because the informants assured me it was one insect the children preferred not to play with—an excellent confirmation of the caution. *Chlorion aeriatus*, the Sphecid wasp, induces [752] similar symptoms by its sting. Here as a cure, Vic's mentholate tablets were said to be used, smeared on the injured spot. This cure is also [177] applied by the Mexicans and the Seris probably adopted it from them. The sting of this wasp is [753] considered more dangerous to children than to adults. The Velvet wasps[12] (Multillids) are also supposed to sting with the rear of the body causing some pain. Finally the *Hemisia*, and Anthrophorid bee inflict a good bite but otherwise are harmless.

Arachnids on the whole are more feared than the *Hymenoptera* and include what the Seris believe to be the most dangerous of all terrestrial arthropods, with a very good justification. The effects of the damage inflicted by these creatures is more lasting and overpowering. The Black Widow easily takes first place and is feared as much as the gecko or the rattler. Some Seris even claim it is the most dangerous of all creatures. It [753] may cause death, they say, although usually one can do with a 2-3 day illness. However, to small children the bite (or as they say "sting" owing

[12] *Ptiloglossa mexicana* causes swelling and much pain lasting 2-3 hours and is considered most unpleasant of all Hymenopterans.

262 The Seris also eat the fruit of the *cholla* cactus, *pitahalla* and *sag-*
222 *uaro*, and probably many other plants in season, but they are wild to get flour. But the principal diet is *cahuasa*, or sea turtle.

225 After a day or so with the Seris, their food supply became exhaust-
123 ed and they made arrangements to take our boat (all they had was a
• [177] *balsa*) and get a sea turtle. So at four o'clock in the morning, with Roberto and Nene, his brother, and myself, they shoved off for the fishing ground. It took two hours of hard rowing to reach the Sonora
[133] side, as the tide was racing up the *Infernillo*. Most of the waters are shallow, with patches of dark and light sandy bottom, with seaweed or grass. On this green grass the turtle feeds; it is their alfalfa field, and it takes a keen-practised eye to see a turtle at the bottom and harpoon him before he escapes.

225 Once on the hunting ground, water, one of the Seris stood in the
[411] bow with a harpoon twenty feet long, a detachable barb on the end of it, and a heavy line attached. The Seri in the bow motioned with his hand this way or that, slow or fast, and watched the bottom. At last he plunged his spear and withdrew the pole. The turtle swam awhile
[411] until exhausted, and then he was drawn alongside, his head pounded with an ironwood club, and then he was turned on his back and drawn on board. This called for great skill in balancing the cranky, smooth-bottomed boat to keep it from shipping a wave.

225 When a Seri goes in his native *balsa*, which only holds one man, he
501 straddles the middle part on his knees, resting them on seaweed. The craft is light and is a good sea craft, but it is low in the water and the man is wet all the time. He uses a double-bladed paddle, and his harpoon rests against pegs set in the *carrisos*. A rock which serves to quiet the turtle, two pointed stakes and a heavy fish line complete the equipment. He has to paddle across to the other side in that cramped position, say eight or ten miles, very early in the morning, then watch his chance to harpoon. If successful he brings up the turtle, knocks him on the head with the rock, pulls him on the end of the craft by skillful manipulation, cut slots in the front flippers, put stakes through and into the *carriso*, pinning him firmly in place, then paddle back.

225 The wind came up strong when we started to return from our turtle
123 hunt and with wind and tide against us we rowed across the Island. Bob and his brother disembarked and took it afoot for camp, a distance of ten miles, reaching there at two p.m. The Seris made a tump line and towed the boat, one towing and two warping off-shore until we arrived at camp about four p.m.

When the bow was run up on the shore everybody came down, the women and children talking a steady stream in their strange jargon.
123 They soon jerked the heavy turtle out, dragged him up the beach on
262 his back, and began immediately to cut him up. Bob spoke for the breast, which is a white plate on the underside of the turtle with

[text continues on p. 168]

242 Burro meat comes first in their estimation, then mares, then steers, but they take what they can get and no questions asked. Burro deer or black tail is a great article of diet, and these deer are on the Island. Wolves and coyotes are on the Island also. I do not think they eat them.

266 As I have said, the Seris are reputed to be cannibals, or to have been. Since those who furnished the meals cannot speak, it is a matter not entirely proven.

648 177 There is a war on between Mexican fishermen and the Seris. The Seris are wild for boats and will do almost anything to get one, so two years ago a chance occurred and they killed seven drunken Mexican fishermen and seized their boat. Last summer, some fishermen surprised the Seris, killed one, and recovered the boat. They mourn this boat a lot more than they do the dead man.

648 Twenty or thirty years ago, Governor Ysabel came here with some troops to capture some Yaquis who had joined the Seris. The Governor told the Chief he would have to give up the Yaquis, as they were outlaws. The next day the Seris brought in six right hands. They said they had killed the Yaquis. Asked how and why, they said they had killed them while they slept and they wanted their guns. They cut off the right hand of each as proof.

With all their apparent friendship, we never go without arms. When we sleep our rifles are alongside of us, and we wear our revolvers with us. Sometimes we roll in with our clothes on. But they have never, by sign or act, shown anything but friendship.

851 123 177 A baby boy about four months old was in camp, so Rafael Ysabel baptized him and gave his name Rafael, and presented him with a little gold cross of which his mother was very proud. She held the baby while he poured a little precious fresh water over its head and repeated:

"In the name of the Father, Son and Holy Ghost, I name thee Rafael. . ."

123 Curious black eyes follow us always. When we eat, the Seris often squat around us and watch every mouthful. If there is any bread, gravy, grease, beans or meat left over, we pass it on and they certainly clean up.

While we eat, the waves are always lapping on the shore upon which many pretty shells are thrown by the tide, besides water-worn pumice stone in all sizes down to a small marble.

Our meals are very simple. We bake biscuit in the dutch oven for every meal, cook turtle meat, if we have it, or beans or rice or spuds.

[text continues on p. 171]

ever washed; it is licked clean.

415 One time a bunch of Seris camped near a ranch and spied a white
• 177 porcelain chamber pot sunning itself. They immediately secured it and began cooking in it, without washing it first. The rancher saw them and told them that it was dirty and told them not to cook in it. They said they would clean it up after they got through and leave it as it was before they finished with it. When they come to Hermosillo they get pots from heaps of city refuse and carry them back as prizes to the Island.

123 We made smokes to attract attention, but all to no purpose, until
504 about three o'clock the car appeared. It could not come close to the beach as the sand was too soft, so we had to pack everything two hundred yards in soft sand. The *balsa* was very heavy and some distance away. It also had some things tied on it, so Bob pulled off his pants and we pushed it into the surf. Bob first stood up, but it rocked so he got on his knees and pushed out with a pole and got it headed to the rollers, after which it rode easier. He then lost his pole, and in struggling to recover it the *balsa* rolled over with him and dumped him in the surf, but he grabbed the side and rolled it right again. He could then touch bottom, so he came in through the surf with it and we dragged it up and unloaded three turtle shells and a few other things. There were four of us and we put oars under it and gradually lifted and carried it to the truck.

It must have weighed six hundred or seven hundred pounds, a good part of which was water. I must say I was glad to see it started on its long land-journey.

123 The Indian messenger had arrived with my note which brought the truck. Bob, Luis and the Mexican took the boat and tried to go into the place where they hid it, but it was low tide and the boat could not enter, so they beached it and walked to Agua Sarco where we had preceded them by two or three hours. We had, over the last of our grub, a little rice and beans. As many doves were flying about the water, I shot fifteen or twenty. One of my shots brought down seven doves.

439 Before night all the Seris were camped near us, and when Bob came,
123 Louis had brought all our trade stuff, so I began bartering right away.

As all were hungry we gave each man and woman three cups of flour, and three pieces of *panoche*, cakes of coarse brown sugar. They were wild for this, so when they had finished they were well disposed.

On the Island I had been called a cheerful liar for promising things, but now it was different. Three new butcher knives, all bright and shiny, I traded for three rusty homemade affairs. Two were made of barrel hoops and one from the piece of a shovel. This was a way-up knife. For the violin I traded a harmonica, and for three carved

(text continues on p. 187)

123 [361] [312] [342] Clustered near this well were brush windbreaks joined together, divided by brush partitions all open on one side. Here were gathered several Seri families. There was no such thing as privacy or seclusion.

As soon as we stopped and unloaded we were immediately surrounded by a curious, half-starved mob of forty men, women and children, about fifteen to twenty children. All dirty, all ragged, all hungry. Some of them I recognized: others were new to me.

While preparing and eating our supper this motley crowd formed a circle about us and hungrily watched every mouthful. We gave them a little food and an orange all around, and they finally left. By that time we had also finished our bread and coffee and followed to the brush shelters.

535 123 [523] A dance was immediately started. A place was hollowed in the sand, a few short planks placed over it, and the dance was on. Music was furnished by men tapping on an inverted basket and chanting. Only one man danced at a time. Sand was thrown over the planks and the Indian danced a shuffle, scraping his bare feet on the boards. He held a staff in his right hand and danced to a song called in Spanish *El Toro*. Later on other dancers performed, then gave us the *venado* (deer) dance, taught them by the Yaquis. [171]

This dancer represents a timid deer, hopping up and down to the time of a rattle held in the right hand, and the chanting of the singers. The *venado* dancers stooped over frequently, turning first to one side and then the other to look behind. Manuel Encina was the *venado* and Chico Romero, a very large young Seri, acted the part of a coyote, crawling and jumping on all fours and barking and every once in a while biting the calf or thigh of the *venado*, then jumping back and barking. It was acted with great realism, and the onlookers, especially the children, enjoyed it immensely.

A wilder, more barbaric scene was probably seldom witnessed in America than this gathering of Seris on the shores of the Gulf of California, dancing the *venado*. The camp fire threw a flickering light over dark fierce faces with low foreheads and frowsy unkempt hair. [302] One man, Luis Torres, the head "ship carpenter" with a moustache and chin beard, his hair low-down framing his dark face, looked like a savage from the wilds of New Guinea. Another, Santo Blanco, a secondary chief below Juan Tomas, has a straggling moustache curling over cruel projecting lips which rarely smile, while his fierce black eyes peering through his black thatch of hair, have a perpetual scowl. The monotonous sing-song chant accompanied by the soft roar of the surf added an indescribable eeriness and weirdness to the dark night.

123 We soon turned in as it was then eleven o'clock, and we all fell asleep lulled by the waves of the sea.

123 and on our way, headed south, rounding the point with the tide in our
484 favor. It was a rowing proposition. During mornings the sea is calm and the swells glassy. Usually at noon the wind comes up, mostly ahead and against us. Last night we could see the light of a camp fire on the point opposite us, and soon we spied a boat headed for the Island. We had left the women and older children to walk and they met us where we landed. At noon we camped for dinner in a lovely cove, and soon three other boats joined us with their cargoes of women, children and dogs. We ate quickly and got under way again as soon as possible, and even then we were the last boat. The trip was bad, as all the people were loaded in the boats which made them low in the water.

123 It was a pretty sight to see the Seris in their *pangas*, boats
484 shaped like dories, graceful, narrow and swift, kneel in the bottom
504 and dip their broad paddles into the waves and shoot into the open sea like dark-skinned Vikings, wild hair flying.

As soon as we emerged from the cove the wind and tide struck us dead ahead, and progress was slow although the swells were behind us. After rounding a point the wind blew on the forward quarter and all the boats, now increased to five, hoisted their sails. We also stepped our mast, sheeted our flour-sack sail, and bowled through the sea, carrying a bone in our mouth.

Chico's boat ahead had no sail and when we neared it, steered with superb skill by the wild-looking Seri, Luis Torres, he had a tow line aboard and thereafter we held him in tow until finally the wind shifted dead ahead and all the boats lowered their sails, unstepped their masts and began paddling. One *pangah* had a sail with part of it loose and flapping at the top like a flag. Roberto said the Seris did not want to cut off this useless piece for fear of spoiling the sail, so there it flapped whenever the sail was sheeted home.

123 About three thirty in the afternoon we rounded a bold rocky point
484 and entered a beautiful curving bay of quiet water, and here we landed for the night camp. Soon all the boats were unloaded. Men and children hunted driftwood for camp fires, two boats at our insistence set off fishing, and Stan and three Seris took their rifles and went hunting. All parties later returned without fish or game, so, as our meat had disappeared like a beautiful dream, we had to dig into our corn and flour to feed thirty or forty hungry Indians. The children stood about like a bunch of hungry cormorants and we promised them *pinole*, or flour paste.

123 Looking at these half naked children with their swarthy little
177 bosoms bare and most of them bare from the waist down, I dug out some safety pins and began with the little girl Luz, who was vigorously stirring the paste mass and pinned her waist over her bare breast and tummy with two bright safety pins. She never ceased stirring. Each bare breast I pinned the shirt over as the night was chilly. The children quick to catch on and keen with desire born of privation, each pulled his or her shirt open even when it had a button, or had

177 123 been fastened with a string---each child eager for a safety pin. A little child two and a half years old was shoved forward for a pin, its round black eyes dancing with anticipation, but its dress had no opening in front, so I laughed and shook my head and everyone appreciated the joke. But, not to be defeated, a little girl untied the child's waist from behind and spread it open, exposing its little brown body from head to feet, and called my earnest attention to it. I then pinned up the dress. Then the older ones crowded around me, but I had used up a whole paper of pins, so I shook my head. I gave the empty paper to an eager child, although a dozen hands were outstretched for it. By making the children happy I pleased the parents.

123 By this time the flour soup was thick and ready, and Roberto baled it out with a cup into the various vessels eagerly outstretched to receive it. As the cup would drip, little hands caught the priceless drops before they reached the sand. As each got his proportion he began sticking his fingers into the mess and licking them off. Many took their *pinole* to camp and the others secured a taste also. A small piece of bread dropped into the sand was snatched up, by a child, from under the nose of a dog. She rubbed off the sand and devoured it.

When all had vanished to their various camps I opened the box of candies---small round drops of green, red and yellow. I filled our coffee pot and went to each camp and gave each man, woman and child about ten candies.

439 123 Since I wanted shell necklaces, the women had combed the beaches and gathered plenty of shells, and strung them while resting. This evening they were draped about their necks, and they wished to trade, so I traded for about a dozen---one small round mirror for one, five needles for another, five safety pins for another, blue face paint for another. Mirrors were most in favor.

291 302 142

206 *Seri outside beauty parlor*

291 The Indians made a mound of sand full length of the robe and amply wide rounding off the top. On this the robe was spread, flesh side up, and pinned to the mound by slender slivers of *carriso* and left exposed to the sun. The skins were singularly free from oil or fat and in a few hours, the robe was cured. The pins removed, the sand shaken from the plumage, and it was ready to use as a blanket covering at night or in old times, as clothing wrapped around the body.

The robes of silvery gray are from male Pelicans and are larger and more attractive than robes from the female birds, which have white breasts, edged with gray.

291 Before the garments and costumes of civilization encroached on the
• 177 Seris, Pelican robes and deer skins were the only clothing worn by the natives, but now they have adopted civilized ways to a great extent, Pelican robes as clothing became obsolete.

SERI BLUE

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ABSTRACT

The blue which the Seri Indians of Sonora, Mexico, use in face painting is not the mineral dumortierite, as previously believed, but is a prepared pigment. This paper is a description of the process in which three elements are combined to produce this pigment.

McGee and Kroeber reported the mineral dumortierite as the source of the blue pigment used in Seri face painting (McGee 1898: 165-6; Kroeber 1931: 27). Coolidge described two blues, one a mixture of gypsum and a boiled root, the other a blue stone found on Tiburon Island (Coolidge 1939: 200). Xavier mentioned dumortierite and commercial bluing. She also referred to a third blue obtained from a plant on Tiburon (Xavier 1946). Present investigation has shown that as far as the Seri know, the only blues they have ever used are *ika?óil* "to cause to be blue" (commercial bluing) and the highly prized *?antezj kóil* "blue clay" of their own manufacture.[1]

The components and the method of manufacture of *?antezj kóil* are said to have been taught to the women long ago by *?ant i?akímxoj* "they who tell the things about the earth." The actual color transformation is veiled in mystery to the Seri who say that if the process of making the clay is observed by any girl who has not passed the menarche, the blue will not appear. Its appearance is not attributed to shaman power, however.

?antezj kóil has been in less demand during the last few decades since commercial bluing has been readily available. Nevertheless, *?antezj kóil* is the blue preferred by those women who continue to adorn their faces in the traditional manner.

The three ingredients used in making the blue clay are the root bark of *xkoktz (Franseria dumosa)*, *ikí kóizj* "to grind with" (a mixed clay in which montmorillonitic layers predominate), and *mokni óoxW* "excrement (sap) of *mókni (Guaiacum coulteri)*." The Seri say that the *ikí kóizj* and the *mókni* are found only on Tiburon Island. The root bark of *tinkl (Franseria ambrosioides* Cav.) or of *xneejan síiktoj (Stegnospermum halimifoliam)* can be used instead of *xkoktz*. *tinkl* gives a distinct aroma to the clay. The plants mentioned are fairly common along the Sonoran coast.*

*EDITOR'S NOTE: It is interesting to note that none of the ingredients is blue in its unaltered state.